



То:	Amí Hafkemeyer / Energy Facility Site Evaluation Council Joanne Snarski / Energy Facility Site Evaluation Council Sean Greene / Energy Facility Site Evaluation Council
From:	Jess Taylor / Tetra Tech, Inc. Paul Hicks / Tetra Tech, Inc.
Cc:	Mike DeRuyter / Aurora Solar, LLC Scott Kringen / Aurora Solar, LLC Alicia Schulz / Washington Department of Ecology
Date:	June 16, 2023
Subject:	Badger Mountain Solar Energy Project: Data Request 3 Response – Wetlands and Waters

On behalf of Aurora Solar, LLC (Applicant), this memorandum provides responses to the Energy Facility Site Evaluation Council (EFSEC) letter sent on May 11, 2023 regarding additional information requested about wetlands and waters for the Badger Mountain Solar Energy Project (Project).

Requests and corresponding responses are provided below:

- 1. Provide all additional USACE Wetland Determination Data Forms for sample plots that were collected in the Project Area but not included with the submitted wetland delineation report.
- 2. Provide maps showing the locations of the additional sample plots not included with the wetland delineation report.

Response: In response to items 1 and 2, Figure 1 shows the locations of additional sample points that were collected in the Project Area and Attachment A provides the data sheets for each sample point.

3. Provide the preliminary jurisdictional determination Avangrid received from USACE for the project.

Response: Following a call with Brad Johnson at the U.S. Army Corps of Engineers on December 9, 2022, and at the USACE's recommendation, the Applicant agreed to accept a Preliminary Jurisdictional Determination (PJD) for aquatic resources within the Project area and is filing a request for the PJD.

- 4. 4. Perform a desktop delineation of offsite wetlands outside of the Project Area that may have buffers extending into the Project Area. Include completed Ecology rating forms for these wetlands and the corresponding buffer widths. Please submit this in the form of a:
 - A memo summarizing methods used for the desktop delineation.
 - Map(s) of the offsite wetlands and their corresponding buffers.
 - And an Ecology rating form for each wetland.

Response: In response to item 4, Figure 1 shows the location of the potential wetland within a conservative 300-foot buffer of the Project boundary, data sheets for sample points WT-100 and WT-

101 are included in Attachment A, and the estimated Eastern Washington Wetland Rating Summary (Hruby 2014) form for the potential wetland is provided in Attachment B.

A summary of the desktop delineation for the potential wetland included:

- Drawing a conservative 300-foot buffer around the Project Area boundary at the request of EFSEC and the Washington Department of Ecology.
- Analyzing the 300-foot buffer for any signs of water inundation or pooling within the growing season in the historical orthoimagery.

NHD and NWI locations within the buffer are classified as waterways (R3UBH) without wetland characteristics. There is one location near sample points WT-100 and WT-101 where surveyors did observe some cattails during the growing season outside of the Project area boundary. That desktop delineated wetland is buffered and shown on the attached Figure 1.

FIGURE





ATTACHMENT A

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24: the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	

Project/Site: Badger Me	ountain Solar			City/County: Douglas County				Sampling Date:	4/19/202		
Applicant/Owner: A	vangrid					State:	WA	Sampling Point:	WT-100		
Investigator(s): Jessica											
Landform (hillside, terrace, etc.): slope below crop Local relief (concave, convex, none): slope Slope (%): 15											
Subregion (LRR):	.RR B	Lat: 47.441504	°		_ong: <u>-120</u>).157100°		Datum:			
Soil Map Unit Name: 243: Morrow-Argabak-Badge complex, 15 to 30 percent slopes NWI classification: R5UBH											
Are climatic / hydrologi	c conditions o	n the site typical	for this time of year	r? Yes	Х	No	(If no, expla	ain in Remarks.)			
Are Vegetation,	Soil, o	r Hydrology	significantly distur	bed? Are "I	Normal Circ	cumstances'	" present?	Yes <u>X</u> Nc			
Are Vegetation,	Soil, o	r Hydrology	_naturally problema	atic? (If ne	eded, expla	ain any answ	vers in Rem	arks.)			
SUMMARY OF FI	NDINGS –	Attach site n	nap showing sa	ampling p	oint loca	itions, tra	insects, i	mportant feat	ures, et		
Hydrophytic Vegetatio	on Present?	Yes	No <u>X</u>	Is the Sa	mpled Area	a	(00				
Wetland Hydrology Pr	resent?	Yes		within a v	weualiù ?						
Demenulses											

Remarks:

Toe slope of hill growing winter wheat, sediment deposits from upslope. See photopoint 100 in the wetland delineation report.

VEGETATION – Use scientific names of plants.

			Absolute	Dominant	Indicator			
Tree Stratum	(Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:		
1. 2.						Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
3. 4.						Total Number of Dominant Species Across All Strata:	1	(B)
Sapling/Shrub Stra	atum (Plot size:)	=Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	_(A/B)
1								
2						Prevalence Index worksheet:		
3.						Total % Cover of:	Multiply by	/:
4.						OBL species 0 x 1 =	0	
5.						FACW species 0 x 2 =	0	
				=Total Cover		FAC species 0 x 3 =	0	
Herb Stratum	(Plot size: 5)				FACU species 0 x 4 =	0	_
1. Triticum aestive	um	_	5	Yes	UPL	UPL species 5 x 5 =	25	
2.						Column Totals: 5 (A)	25	— (B)
3				. <u></u> .		Prevalence Index = B/A =	5.00	_` ′
4.							0.00	-
5.						Hydrophytic Vegetation Indicators	5:	
6.						Dominance Test is >50%		
7				. <u></u> .		Prevalence Index is $\leq 3.0^{1}$		
8						Morphological Adaptations ¹ (Pro	wide sunnc	ortina
0.			5	=Total Cover		data in Remarks or on a sepa	arate sheet)
Woody Vine Stratu	ım (Plot size:)			Problematic Hydrophytic Vegeta	ation ¹ (Expl	ain)
1						¹ Indicators of hydric soil and wetland	1 hydrology	must
2						be present, unless disturbed or prob	lematic.	
				=Total Cover		Hydrophytic Vegetation	X	
% Bare Ground in	Herb Stratum 95	% (Cover of Biot	ic Crust	_	Present? Yes No	<u> </u>	
Remarks:								

(inches)		Redox	Feature	es			
0.10	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 3/3 100					Sandy	sandy loam
<u> </u>							
¹ Type: C=Con	centration, D=Depletion, RM=	Reduced Matrix, C	S=Cove	red or Co	pated Sa	and Grains. ² L	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil In	dicators: (Applicable to all L	RRs, unless othe	rwise n	oted.)		Indica	tors for Problematic Hydric Soils ³ :
Histosol (A	(1)	Sandy Red	ox (S5)			1	cm Muck (A9) (LRR C)
Histic Epip	edon (A2)	Stripped M	atrix (S6	5)		2	cm Muck (A10) (LRR B)
Black Histi	ic (A3)	Loamy Muc	cky Mine	eral (F1)		Iro	on-Manganese Masses (F12) (LRR D)
Hydrogen	Sulfide (A4)	Loamy Gle	yed Mat	rix (F2)		R	educed Vertic (F18)
Stratified L	ayers (A5) (LRR C)	Depleted M	latrix (F3	3)		R	ed Parent Material (F21)
	((A9) (LRR D)	Redox Dari	k Surfac	e (F6)			ery Shallow Dark Surface (F22)
	Selow Dark Surface (ATT)		ark Suri			0	ther (Explain in Remarks)
	Sunace (A12)		16221011	s (го)			
Sandy Mud	ved Matrix (S4) ³ Indicato	rs of hydrophytic ve	anetation	and we	tland hy	rdrology must be pr	esent unless disturbed or problematic
Bestrictive La	ver (if ebeenved):		gotatio			diology materies pr	
	yer (if observed):						
Type.	hoc):	_				Hydric Soil Pros	ant? Vas No Y
Beptil (illo							
Remarks:							
IYDROLOG	γ						
HYDROLOG Wetland Hydro	SY ology Indicators:						
HYDROLOG Wetland Hydro Primary Indicat	SY ology Indicators: tors (minimum of one is requir	ed; check all that a	apply)			<u>Secor</u>	dary Indicators (minimum of two require
HYDROLOG Wetland Hydr Primary Indical Surface W	iY ology Indicators: tors (minimum of one is requir ater (A1)	ed; check all that a Salt Crust (apply) (B11)				idary Indicators (minimum of two required ater Marks (B1) (Riverine)
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HYDROLOG Wetland Hydro Primary Indicat Surface W High Wate Saturation Water Mar	SY ology Indicators: tors (minimum of one is requir later (A1) r Table (A2) (A3) ks (B1) (Nonriverine)	ed; check all that a Salt Crust (Biotic Crus Aquatic Inv Hydrogen S	(B11) t (B12) rertebrat Sulfide C	es (B13) Ddor (C1)		<u>Secor</u> W S D D	dary Indicators (minimum of two required ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
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U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24: the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-0	7-24; the proponent agency is CECW-CO-R

Project/Site: Badger	Mountain Solar	City/Co	City/County: Douglas County					te: 4/19	9/2021		
Applicant/Owner:	Avangrid						State:	WA	Sampling Po	int: W	T-101
Investigator(s): Jessi	ca Taylor/Katie	e Pyne/Sara Frai	nk	Section,	, Township	, Range:					
Landform (hillside, te	errace, etc.): <u>hi</u>	llside		Local relie	f (concave	, convex,	none): <u>n</u>	one		Slope (%)): 15
Subregion (LRR):	LRR B	Lat: 47.44150	04°		Long): <u>-120.15</u>	57100°		Datu	m:	
Soil Map Unit Name:	243: Morrow-A	Argabak-Badge	complex, 15 to 3	0 percent sl	lopes		N	WI classifi	cation: None		
Are climatic / hydrolo	gic conditions	on the site typic	al for this time of	year?	Yes X	No		(If no, exp	ain in Remark	s.)	
Are Vegetation	, Soil, o	or Hydrology	significantly d	listurbed?	Are "Norn	nal Circun	nstances'	" present?	Yes X	No	_
Are Vegetation	, Soil, o	or Hydrology	naturally prob	plematic?	(If needed	l, explain	any answ	vers in Ren	narks.)		
SUMMARY OF F	-INDINGS	Attach site	map showin	g sampli	ng poin	t locatio	ons, tra	insects,	important	eatures	s, etc.
Hydrophytic Vegeta	tion Present?	Yes	No X	ls th	he Sample	ed Area					
Hydric Soil Present	?	Yes	No X	with	hin a Wetl	and?	٢	/es	No X		
Wetland Hydrology	Present?	Yes	No <u>X</u>								

Remarks:

Toe slope of hill growing winter wheat, sediment deposits from upslope. See photopoint 101 in the wetland delineation report.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) % Cover Species? Status Dominance Test work 1. Number of Dominant S	(sheet:		
1. Number of Dominant S			
	pecies That		
2 Are OBL, FACW, or FA	AC:	0	(A)
3 Total Number of Domir	nant Species		
4 Across All Strata:		1	(B)
=Total Cover Percent of Dominant S	pecies That		
Sapling/Shrub Stratum (Plot size:) Are OBL, FACW, or FA	AC:	0.0%	(A/B)
1			
2 Prevalence Index wor	rksheet:		
3 Total % Cover of:		Multiply b	y:
4 OBL species0	x 1 =	0	
5. FACW species 0	x 2 =	0	_
=Total Cover FAC species 0	x 3 =	0	
Herb Stratum (Plot size: 5) FACU species 0	x 4 =	0	
1. Triticum aestivum 5 Yes UPL UPL species 5	x 5 =	25	
2. Column Totals: 5	(A)	25	(B)
3. Prevalence Index =	B/A =	5.00	
4.			_
5. Hydrophytic Vegetatio	on Indicator	s:	
6. Dominance Test is	s >50%		
7. Prevalence Index i	s ≤3.0 ¹		
8. Morphological Ada	ptations ¹ (Pro	ovide supp	orting
5 =Total Cover data in Remarks	s or on a sepa	arate sheet	t)
Woody Vine Stratum (Plot size:) Problematic Hydro	phytic Vegeta	ation ¹ (Exp	lain)
1 ¹ Indicators of hydric so	il and wetlan	d hydrology	v must
2. be present, unless distr	urbed or prob	lematic.	
=Total Cover Hydrophytic			
Vegetation			
% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust Present? Yes	No	X	

Depth	Matrix		Red	dox Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textur	e	Remarks	
0-17	10YR 3/3	100					Sandy	/	sandy loam	
					·					
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix,	CS=Cove	ered or C	pated Sa	and Grains.	² Location: PL	L=Pore Lining, M=	Matrix.
Hydric Soil I	ndicators: (Applica	ble to all L	_RRs, unless ot	herwise n	oted.)		h	ndicators for Pr	oblematic Hydric	Soils ³ :
Histosol	(A1)		Sandy R	edox (S5)				1 cm Muck (A	49) (LRR C)	
Histic Ep	ipedon (A2)		Stripped	Matrix (Se	5)			2 cm Muck (A	\10) (LRR B)	
Black His	stic (A3)		Loamy N	/lucky Min	eral (F1)			Iron-Mangane	ese Masses (F12)	(LRR D)
Hydroger	n Sulfide (A4)		Loamy C	Bleyed Ma	trix (F2)		_	Reduced Ver	tic (F18)	
Stratified	Layers (A5) (LRR C	;)	Depleted	d Matrix (F	3)		_	Red Parent M	/laterial (F21)	
1 cm Mu	ck (A9) (LRR D)		Redox D	ark Surfac	ce (F6)		_	Very Shallow	Dark Surface (F2	2)
Depleted	Below Dark Surface	e (A11)	Depleted	d Dark Sur	face (F7)			Other (Explai	n in Remarks)	
Thick Da	rk Surface (A12)		Redox D	epression	s (F8)					
Sandy M	ucky Mineral (S1)	2								
Sandy G	leyed Matrix (S4)	Indicato	ors of hydrophytic	vegetatio	n and we	tland hy	drology must	be present, unles	ss disturbed or pro	blematic.
Restrictive L	ayer (if observed):									
Tuner										
Type.										
Depth (in	iches):						Hydric Soil	Present?	Yes	No <u>X</u>
Depth (in Remarks:	iches):						Hydric Soil	Present?	Yes	No <u>X</u>
Depth (in Remarks:	uches):						Hydric Soil	Present?	Yes	No <u>X</u>
Depth (in Remarks:	iches):						Hydric Soil	Present?	Yes	No <u>X</u>
Depth (in Remarks:	iches):						Hydric Soil	Present?	Yes	No <u>X</u>
Depth (in Remarks:	iches):						Hydric Soil	Present?	Yes	No <u>X</u>
Type Depth (in Remarks:	GY						Hydric Soil	Present?	Yes	No <u>X</u>
Type. Depth (in Remarks:	GY						Hydric Soil	Present?	Yes	No <u>X</u>
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic	GY GY Irology Indicators: ators (minimum of o	ne is requi	red; check all that	it apply)			Hydric Soil	Present?	Yes	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V	GY GY Irology Indicators: ators (minimum of o Water (A1)	ne is requi	red; check all tha	tt apply) st (B11)			Hydric Soil	Present?	Yes tors (minimum of t (B1) (Riverine)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat	GY GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2)	ne is requi	red; check all tha Salt Crus Biotic Cr	tt apply) st (B11) ust (B12)			Hydric Soil	Present? Secondary Indica Water Marks Sediment De	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riveri	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio	GY GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3)	ne is requi	red; check all tha Salt Crus Biotic Cr Aquatic	<u>it apply)</u> st (B11) ust (B12) Invertebra	tes (B13)		Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri (D2) (Noriveri	ne is requi	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge	<u>it apply)</u> st (B11) rust (B12) Invertebra n Sulfide (tes (B13) Odor (C1)	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) (Motor (B10) (C2)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor	ne is requir ne) nriverine)	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized	tt apply) st (B11) ust (B12) Invertebra n Sulfide (I Rhizosph	tes (B13) Ddor (C1 eres on I) iving Ro	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riveri s (B3) (Riverine) terns (B10) Water Table (C2) water C2)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Crocko (B6)	ine is requii ne) nriverine) ine)	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized Presenc	at apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc	tes (B13) Ddor (C1 eres on l ced Iron () Living Ro C4)	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Nater Table (C2) ows (C8) posits (C8)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) p Visible on Aerial II	ne is requir ne) nriverine) rine)	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I	tt apply) st (B11) ust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc	tes (B13) Ddor (C1 eres on l ced Iron (ction in Ti) _iving Ro (C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aqui	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Imat tard (D3)	No X wo required
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial In ained Leaves (B9)	ne is requir ne) nriverine) rine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I 7) Thin Mu	at apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xnlain in F	tes (B13) Ddor (C1 eres on l ced Iron (tion in Ti e (C7) emarks)) _iving Ro C4) Iled Soils	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burn Saturation Vis Shallow Aquit EAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Saturatio Water Ma Sedimen Drift Dep Surface \$ Inundatio Water-St	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial In cained Leaves (B9)	ine is requir nriverine) nriverine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I 7) Thin Muc Other (E	<u>at apply)</u> st (B11) ust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ch Surface xplain in F	tes (B13) Ddor (C1 ieres on l ced Iron (ction in Ti e (C7) Remarks)) _iving Ra (C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial II ained Leaves (B9) vations: ar Present?	ine is requir ine) nriverine) ine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I 7) Thin Mu Other (E	at apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ch Surface xplain in F	tes (B13) Ddor (C1 eres on l ced Iron (tion in Ti e (C7) Remarks)) Living Ra (C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aquii FAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5)	No X
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In atined Leaves (B9) vations: er Present? Ye Present? Ye	ne is requir ne) nriverine) rine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I 7) Thin Mut Other (E	tt apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xplain in F Depth (i Depth (i	tes (B13) Ddor (C1 eres on I ced Iron (ttion in Ti e (C7) Remarks) nches):) _iving Ro C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season W Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Ima tard (D3) Test (D5)	No X wo required ine)
Type	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In ained Leaves (B9) vations: er Present? Ye resent? Ye resent? Ye	ne) nriverine) nine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized Presence Recent I 7) Thin Muc Other (E	tt apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xplain in F Depth (i Depth (i Depth (i	tes (B13) Odor (C1 eres on l ced Iron (tition in Ti (C7) Remarks) nches): nches):) _iving Ro C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Ima tard (D3) Test (D5)	No X wo required ine) gery (C9)
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Wate Saturation Pr (includes cap	GY frology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial In ained Leaves (B9) vations: er Present? Ye Present? Ye esent? Ye illary fringe)	ine is requir nriverine) nriverine) magery (B7	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I 7) Thin Muc Other (E	tt apply) st (B11) ust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xplain in F Depth (i Depth (i	tes (B13) Ddor (C1 ieres on l ced Iron (ction in Ti ction in Ti (C7) Remarks) nches): nches):) _iving Ro (C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5) ent? Yes	No X wo required ine) gery (C9)
Type. Depth (in Remarks: 1YDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Surface Cap Surface S Inundatio Water Table I Saturation Pr (includes cap Describe Rec	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial II ained Leaves (B9) vations: er Present? Ye resent? Ye resent? Ye esent? Ye ese	ine is requii ne is requii nriverine) rine) magery (B7 es es es gauge. mo	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I Thin Mut Other (E	at apply) st (B11) ust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ch Surface xplain in F Depth (i Depth (i Depth (i	tes (B13) Ddor (C1 eres on l ced Iron (ttion in Ti (C7) Remarks) nches): nches): nches):) Living Ra (C4) Iled Soils	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season W Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral Hydrology Prese	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5) ent? Yes	No X
Type. Depth (in Remarks: IYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pr (includes cap) Describe Record	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In cained Leaves (B9) vations: er Present? Ye Present? Ye esent? Ye illary fringe) corded Data (stream	ne is requir neis requir nriverine) rine) magery (B7 es es gauge, mo	red; check all tha Salt Crus Biotic Cr Aquatic Hydroge Oxidized Presence Recent I 7) Thin Muc Other (E No X No X No X No X	tt apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xplain in F Depth (i Depth (i Depth (i ial photos	tes (B13) Ddor (C1 eres on I ced Iron (tion in Ti e (C7) Remarks) nches): nches): nches):) _iving Ro C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season W Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral Hydrology Prese	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Ima tard (D3) Test (D5) ent? Yes	No X wo required ine) gery (C9)
Type. Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Wate Saturation Pr (includes cap Describe Reco	GY Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriveri t Deposits (B2) (Nor osits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In ained Leaves (B9) vations: er Present? Ye resent? Ye esent? Ye illary fringe) corded Data (stream	ne is requir nriverine) nriverine) magery (B7 es ss gauge, mc	red; check all tha Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I 7) Thin Muc Other (E No X No X No X	tt apply) st (B11) rust (B12) Invertebra n Sulfide (I Rhizosph e of Reduc ron Reduc ck Surface xplain in F Depth (i Depth (i Depth (i	tes (B13) Odor (C1 eres on l ced Iron (tion in Ti (C7) Remarks) nches): nches): , previous) iving Ro C4) Iled Soil:	Hydric Soil	Present? Secondary Indica Water Marks Sediment De Drift Deposits X Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Shallow Aquit FAC-Neutral Hydrology Prese able:	Yes tors (minimum of t (B1) (Riverine) posits (B2) (Riverine) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imat tard (D3) Test (D5) ent? Yes	No X wo required ine) gery (C9)

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Badger	Mountain Sc	olar	City/C	County: Douglas Co		Sampling Date:	4/19/2021	
Applicant/Owner:	Avangrid				State:	WA	Sampling Point:	WT-122
Investigator(s): Jessi	ca Taylor/Ka	itie Pyne/Sara Frank	Sectio	n, Township, Range	e: <u>32, TX F</u>	RX		
Landform (hillside, te	rrace, etc.):	Drainage/Swale	x, none): <u>cc</u>	oncave	Slor	be (%): <u>3</u>		
Subregion (LRR):	LRR B	Lat: <u>47.440878</u>		Long: <u>-120.</u>	.175960		Datum:	NAD1983
Soil Map Unit Name:	70: Broada:	x-Titchenal complex,	3 to 15 slopes		N	WI classific	cation: <u>R5UBH</u>	
Are climatic / hydrolc	gic conditior	is on the site typical	for this time of year?	Yes <u>X</u>	No	(If no, expl	ain in Remarks.)	
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	Are "Normal Circu	umstances"	' present?	Yes <u>X</u> No	<u></u> د
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	(If needed, explai	in any answ	<i>l</i> ers in Rem	narks.)	
SUMMARY OF F	INDINGS	– Attach site m	ap showing sampl	ling point locat	tions, tra	insects, i	important feat	ures, etc.

Hydrophytic Vegetation Present?	Yes		No	Х	Is the Sampled Area		
Hydric Soil Present?	Yes		No	Х	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes	Х	No				

Remarks:

A large rock pile obstructs a short drainage and creates a low spot. The site is bordered by a wheat field on one side and scabland on the other side. The drainage (ST-117) is very short and ends at this rock pile. Photo point 123 in wetland delineation report.

VEGETATION – Use scientific names of plants.

			Absolute	Dominant	Indicator					
Tree Stratum	(Plot size:)	% Cover	Species?	Status	Dominance Test	workshe	et:		
1						Number of Domin	ant Speci	ies That		
2.						Are OBL, FACW,	or FAC:	_	0	(A)
3.						Total Number of [Dominant	Species		
4.						Across All Strata:		· _	2	(B)
				=Total Cover		Percent of Domin	ant Speci	es That		
Sapling/Shrub Stra	atum (Plot size:)			Are OBL, FACW,	or FAC:	-	0.0%	(A/B)
1										
2.						Prevalence Index	x worksh	eet:		
3.						Total % Cov	er of:	_	Multiply by	y:
4.						OBL species	0	x 1 =	0	
5.						FACW species	0	x 2 =	0	
				=Total Cover		FAC species	0	x 3 =	0	
Herb Stratum	(Plot size: 5)		•		FACU species	0	x 4 =	0	_
1. Bromus tectoru	ım		15	Yes	UPL	UPL species	30	x 5 =	150	
2. Pseudoroegne	ria spicata		15	Yes	UPL	Column Totals:	30	(A)	150	(B)
3.						Prevalence Inc	dex = B/A	 \=	5.00	
4.				·						_
5.						Hydrophytic Veg	etation li	ndicators		
6.						Dominance T	est is >50)%		
7.						Prevalence Ir	ndex is ≤3	.0 ¹		
8.				·		Morphologica	l Adaptati	ions ¹ (Pro	vide suppo	orting
- 			30	=Total Cover		data in Rer	narks or o	on a sepa	rate sheet)
Woody Vine Stratu	um (Plot size:)	•		Problematic H	Hydrophyt	ic Vegeta	tion ¹ (Expl	ain)
1.						¹ Indicators of hvd	ric soil an	d wetland	hvdrology	/ must
2.						be present, unless	s disturbe	d or probl	ematic.	
				=Total Cover		Hydrophytic				
				-		Vegetation				
% Bare Ground in	Herb Stratum 70	%	Cover of Bio	tic Crust		Present?	Yes	No	Х	
Remarks:										

Profile Description: (Describe to the depth	needed to docu	ument ti	ne indica	tor or c	onfirm the absence	of indicators.)	
Depth Matrix	Redo	x Featur	es				
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	arks
0-6 10YR 3/3 100					Sandy	sandy	loam
					`		
				······			
					and Oneine ² l.ee		e NA-NAstrik
Type: C=Concentration, D=Depletion, RM=R	educed Matrix, C	S=Cove	ered or Co	ated Sa	and Grains. Loc	ation: PL=Pore Lining	g, M=Matrix.
Hydric Soli Indicators: (Applicable to all LR	Rs, unless othe	erwise n	otea.)		Indicato	rs for Problematic H	iyaric Solis :
Histosof (AT)	Sandy Red	10X (55)	2)				
Histic Epipedon (A2)		atrix (St) 		2 cm	Managana Maaaaa	
Black Histic (A3)					Iron-	Manganese Masses	(F12) (LRR D)
Hydrogen Suilide (A4)	Loamy Ge	eyed Ma	(FZ)		Redu	Demonst Material (F24)	
Straulled Layers (A5) (LRR C)		/atrix (F	3) 			Parent Material (F21)) - (F00)
I CIII MUCK (A9) (LRR D)		K Sunac	:е (го) face (Г7)		Othe	Shallow Dark Surfac	e (FZZ)
Depieted Below Dark Surface (ATT)						r (Explain in Remark	5)
Thick Dark Surface (A12)		Jiession	S (FO)				
Sandy Mucky Mineral (S1)	of hydrophytic y	agatatia	n and wa	lond by	dralagy must be pres	ant unloss disturbed	or problematic
		egetatio	n and we	land ny	drology must be pres	ent, uniess disturbed	or problematic.
Restrictive Layer (if observed):							
Type: Rock	_						
Depth (inches): 6	_				Hydric Soil Presen	t? Yes_	<u> </u>
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one is required	d; check all that a	apply)			Seconda	<u>ry Indicators (minimu</u>	m of two required)
Surface Water (A1)	Salt Crust	(B11)			Wate	er Marks (B1) (Riveri	ne)
High Water Table (A2)	Biotic Crus	st (B12)			Sedi	ment Deposits (B2) (I	Riverine)
Saturation (A3)	Aquatic In	vertebra	tes (B13)		Drift	Deposits (B3) (River	ine)
Water Marks (B1) (Nonriverine)	Hydrogen	Sulfide (Odor (C1)		Drain	nage Patterns (B10)	
Sediment Deposits (B2) (Nonriverine)	Oxidized F	Rhizosph	eres on L	iving Re	oots (C3) Dry-	Season Water Table	(C2)
Drift Deposits (B3) (Nonriverine)	Presence	of Redu	ced Iron (C4)	Cray	fish Burrows (C8)	
X Surface Soil Cracks (B6)	Recent Iro	n Reduc	tion in Til	led Soil	s (C6) Satu	ration Visible on Aeri	al Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck	Surface	e (C7)		Shal	low Aquitard (D3)	
Water-Stained Leaves (B9)	Other (Exp	olain in F	Remarks)		FAC	-Neutral Test (D5)	
Field Observations:							
Surface Water Present? Yes	No <u>X</u>	Depth (i	nches):				
Water Table Present? Yes	No <u>X</u>	Depth (i	nches):				
Saturation Present? Yes	No <u>X</u>	Depth (i	nches):		Wetland Hydrolo	gy Present? Yes	X No
(includes capillary fringe)							
Describe Described Date (studies with		- 4 - ما مر ا		line and the			

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Badger	Mountain Su	alar		City/County: Do		ntv		Sampling Date:	1/10/2	0021
Angliant/Organia	Augustalin St	Jiai		Outproduitty	igias cou	04-4-	10/0	Sampling Date.	4/19/2	400
Applicant/Owner:	Avangrid					State	VA	Sampling Point:	V I -	126
Investigator(s): Jessi	ca Taylor/Ka	atie Pyne/Sara Fra	nk	Section, Township	, Range:	23N,	21E, 34			
Landform (hillside, te	rrace, etc.):	Swale		Local relief (concave	, convex,	none):	Concave	Slop	be (%):	5
Subregion (LRR):	LRR B	Lat: 47.4582	79	Long	j: <u>120.19</u>	7609		Datum:	10	
Soil Map Unit Name:	407: Titche	enal silt loam, 8 to	15 percent slopes				NWI classif	ication: R5UBH		
Are climatic / hydrolo	gic conditio	ns on the site typic	al for this time of y	/ear? Yes <u>x</u>	No		(If no, exp	olain in Remarks.)		
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? Are "Norn	nal Circun	nstance	es" present?	Yes <u>x</u> No	D	
Are Vegetation	, Soil	, or Hydrology	naturally proble	ematic? (If needed	l, explain	any an	swers in Rer	marks.)		
SUMMARY OF I	INDING	6 – Attach site	map showing	sampling poin	t locatio	ons, t	ransects,	important feat	ures,	etc.
Hvdrophytic Vegeta	tion Present	? Yes	No x	Is the Sample	ed Area					
Hydric Soil Present	?	Yes	No x	within a Wetl	and?		Yes	No x		
Wetland Hydrology	Present?	Yes	No X							
Remarks:				•						
Ephemeral stream 3	321 (ST-321) flows through he	re. Low spot at dov	wnhill end of sagebru	ish. Phot	opoint	129 in the we	etland delineation re	eport.	
VEGETATION –	Use scie	ntific names o	of plants.							

			Absolute	Dominant	Indicator			
Tree Stratum	(Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:		
1 2			·			Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
3. 4.						Total Number of Dominant Species Across All Strata:	2	— (B)
Sapling/Shrub Stra	itum (Plot size:	5)	=Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
1. Artemisia trider	ntata		50	Yes	UPL			_` '
2.						Prevalence Index worksheet:		
3.						Total % Cover of:	Multiply by	/:
4.						OBL species 0 x 1 =	0	
5.						FACW species 0 x 2 =	0	-
			50	=Total Cover		FAC species 0 x 3 =	0	-
Herb Stratum	(Plot size: 5)				FACU species 0 x 4 =	0	-
1. Triticum aestivu	um		50	Yes	UPL	UPL species 100 x 5 =	500	-
2.						Column Totals: 100 (A)	500	(B)
3.						Prevalence Index = B/A =	5.00	-
4.								-
5.						Hydrophytic Vegetation Indicators	s:	
6.						Dominance Test is >50%		
7.						Prevalence Index is ≤3.0 ¹		
8.			·			Morphological Adaptations ¹ (Pro	ovide suppo	orting
			50	=Total Cover		data in Remarks or on a sepa	arate sheet))
Woody Vine Stratu	m (Plot size:)			Problematic Hydrophytic Vegeta	ation ¹ (Expl	ain)
1.			_			¹ Indicators of hydric soil and wetland	d hvdroloav	must
2.						be present, unless disturbed or prob	lematic.	
% Poro Cround in	Horb Stratum OF	0/		=Total Cover		Hydrophytic Vegetation Brocont2 Veg	~	
% Bare Ground In	nero Stratum 95	%	Cover of Blot		_	Present? tesNO		
Remarks:								

Profile Desc	rintion: (Describe)	o the denth	needed to doc	ument the indi	ator or (confirm the a	hsonce of indicat	tors)	
Denth	Matrix	o ne depu	Redo	v Features			bsence of marca	1013.)	
(inches)	Color (moist)	%	Color (moist)	% Type	Loc ²	Textu	re	Remarks	
0-16	10VR 3/2	100				Sand	<u> </u>	sandy loam	
0-10	1011 3/2	100				Janu	у	Sanuy Ioani	
						-			
1				<u> </u>					
'Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, C	CS=Covered or	Coated S	and Grains.	² Location: PL:	=Pore Lining, M=I	Matrix.
Hydric Soil I	ndicators: (Applica	ble to all LF	RRs, unless othe	erwise noted.)		I	ndicators for Pro	blematic Hydric	Soils":
Histosol	(A1)		Sandy Re	dox (S5)		-	1 cm Muck (A	9) (LRR C)	
Histic Ep	ipedon (A2)			latrix (S6)		-	2 cm Muck (A	10) (LRR B)	
Black His	stic (A3)		Loamy Mu	icky Mineral (F1)	-	Iron-Mangane	se Masses (F12)	(LRR D)
Hydroger	n Sulfide (A4)		Loamy Gi	eyed Matrix (F2)		-	Reduced Verti	c (F18)	
	Layers (A5) (LRR C)	Depleted I	Matrix (F3)		-	Red Parent Ma	aterial (F21)	
	CK (A9) (LRR D)	()	Redox Da	rk Surface (F6)		-	Very Shallow I	Jark Surface (F22	<u>2)</u>
Depleted	Below Dark Surface	e (A11)		Jark Surface (F	()	-	Other (Explain	in Remarks)	
	rk Surface (A12)		Redox De	pressions (F8)					
	ucky Mineral (S1)	31	f. h		بملامه مرالم		h		h la un atia
Sandy G	leyed Matrix (54)	Indicators		regetation and v	etiand ng	arology must	be present, unles	s disturbed of pro	plematic.
Restrictive L	ayer (if observed):								
Туре:			_						
Depth (in	iches):					Hydric Soil	Present?	Yes	NO <u>X</u>
Remarks:									
Stream 321 f	lows through here. C	bvious drair	nage from recent	snow melt.					
HYDROLO	GY								
Wetland Hyd	Irology Indicators:								
Primary Indic	ators (minimum of o	ne is require	d; check all that	apply)			Secondary Indicate	ors (minimum of t	wo required)
Surface V	Water (A1)		Salt Crust	(B11)		_	Water Marks (B1) (Riverine)	
High Wa	ter Table (A2)		Biotic Cru	st (B12)		_	Sediment Dep	osits (B2) (Riveri	ne)
Saturatio	n (A3)		Aquatic In	vertebrates (B1	3)	_	Drift Deposits	(B3) (Riverine)	
Water Mater Mate	arks (B1) (Nonriveri	ne)	Hydrogen	Sulfide Odor (C	1)	_	Drainage Patte	erns (B10)	
Sedimen	t Deposits (B2) (Nor	riverine)	Oxidized F	Rhizospheres or	I Living R	oots (C3)	Dry-Season W	ater Table (C2)	
Drift Dep	osits (B3) (Nonriver	ine)	Presence	of Reduced Iror	ı (C4)	-	Crayfish Burro	ws (C8)	
Surface S	Soil Cracks (B6)		Recent Irc	n Reduction in	Tilled Soi	ls (C6)	Saturation Vis	ible on Aerial Ima	gery (C9)
Inundatio	on Visible on Aerial Ir	magery (B7)	Thin Muck	Surface (C7)		-	Shallow Aquita	ard (D3)	
Water-St	ained Leaves (B9)		Other (Exp	plain in Remark	6)		FAC-Neutral T	est (D5)	
Field Observ	vations:								
Surface Wate	er Present? Ye	s	No <u>X</u>	Depth (inches):					
Water Table	Present? Ye	s	No <u>X</u>	Depth (inches):		1			
Saturation Pr	resent? Ye	s	No <u>X</u>	Depth (inches):		Wetland	Hydrology Prese	nt? Yes	No X
(includes car	illary fringe)					1			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Badger	Mountain Solar		C	ity/County: <u>Doι</u>	uglas Cou	inty		Sampling Date:	4/20/2021
Applicant/Owner:	Avangrid					State:	WA	Sampling Point:	WT-228
Investigator(s): Jessi	ca Taylor/Katie	Pyne/Sara Frank	<mark>α S</mark> ε	ction, Township	o, Range:	23N, 21	1E, 34		
Landform (hillside, te	errace, etc.): <u>Dr</u>	ainage	Loca	l relief (concave	e, convex,	none): c	oncave	Slop	pe (%): <u>10</u>
Subregion (LRR):	LRR B	Lat: <u>47.458279</u>		Lonç	g: <u>120.19</u>	7609		Datum:	NAD83
Soil Map Unit Name:	407: Titchenal	silt loam, 8 to 15	percent slopes			N	WI classif	fication: R3UBH	
Are climatic / hydrolo	gic conditions of	on the site typical	for this time of year?	Yes X	No)	(If no, exp	plain in Remarks.)	
Are Vegetation	, Soil, c	or Hydrology	significantly disturbe	ed? Are "Norn	nal Circun	nstances	" present?	Yes <u>X</u> No	o
Are Vegetation	, Soil, c	or Hydrology	_naturally problemati	ic? (If needed	d, explain	any ansv	wers in Rer	marks.)	
SUMMARY OF I	FINDINGS -	Attach site n	nap showing sar	mpling poin	t locatio	ons, tra	ansects,	, important feat	tures, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	tion Present? ? Present?	Yes Yes Yes	No X No X No X	Is the Sample within a Wetl	ed Area and?	Ŋ	Yes	No <u>X</u>	
Remarks:									

Drainage segment in wheat field does not have hydric component. Photo point 228 in the wetland delineation report.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species
4				Across All Strata: 1 (B)
		=Total Cover		Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size:	_)			Are OBL, FACW, or FAC: 0.0% (A/B)
1	_	·		Development to develop to the set
2				Prevalence index worksneet:
3.		·	<u> </u>	Total % Cover of: Multiply by:
4				OBL species 0 x 1 = 0
5				FACW species 0 x 2 = 0
		=Total Cover		FAC species 0 x 3 = 0
Herb Stratum (Plot size: 5)				FACU species 0 x 4 = 0
1. Triticum aestivum	90	Yes	UPL	UPL species 90 x 5 = 450
2.				Column Totals: 90 (A) 450 (B)
3				Prevalence Index = B/A = 5.00
4.				
5				Hydrophytic Vegetation Indicators:
6				Dominance Test is >50%
7.				Prevalence Index is ≤3.0 ¹
8.	_			Morphological Adaptations ¹ (Provide supporting
	90	=Total Cover		data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)			Problematic Hydrophytic Vegetation ¹ (Explain)
1.				¹ Indicators of hydric soil and wetland hydrology must
2.				be present, unless disturbed or problematic.
		=Total Cover		Hydrophytic
				Vegetation
% Bare Ground in Herb Stratum 10 %	Cover of Bio	tic Crust		Present? Yes No X
Remarks:				

								1 0	
Profile Desc	ription: (Describe	to the depth	needed to doc	ument the indi	cator or o	confirm the abser	nce of indicato	rs.)	
Depth	Matrix		Redo	x Features	1.2				
(inches)	Color (moist)	%	Color (moist)	% Туре	e' Loc ²	Texture		Remarks	
0-4	10YR 3/2	100				Loamy/Clayey	/	silt loam	
4-14	10YR 3/2	100				Sandy		sandy loam	
1			- dura e d Martuire d		0	2		News Linder M	Martula
	ncentration, D=Dep	pletion, Rivi=R		S=Covered or	Coated S	and Grains.	Location: PL=F	ore Lining, IVI=	
Histosol			Sandy Re	dox (S5)		11010	ators for Frob		. 30115 .
Histic En	inedon (A2)		Stripped N	Jatrix (S6)			cm Muck (A3)		
Black His	stic (A3)		L oamy Mi	icky Mineral (F	1)	²	ron-Manganese	Masses (F12)	(LRR D)
Hvdroger	n Sulfide (A4)		Loamy Gl	eved Matrix (F2	.)	F	Reduced Vertic	(F18)	()
Stratified	Layers (A5) (LRR	C)	Depleted I	Matrix (F3)	,	F	Red Parent Mate	erial (F21)	
1 cm Mu	ck (A9) (LRR D)	,	 Redox Da	rk Surface (F6)			/ery Shallow Da	ark Surface (F2	2)
Depleted	Below Dark Surfac	ce (A11)	Depleted I	Dark Surface (F	7)		Other (Explain ir	Remarks)	
Thick Da	rk Surface (A12)		Redox De	pressions (F8)					
Sandy M	ucky Mineral (S1)								
Sandy G	leyed Matrix (S4)	³ Indicators	of hydrophytic v	egetation and ۱،	wetland hy	/drology must be p	oresent, unless o	disturbed or pro	oblematic.
Restrictive L	ayer (if observed).	:							
Type:	rock		_						
Depth (in	ches):	14	_			Hydric Soil Pre	sent?	Yes	No X
Remarks:									
HYDROLO	GY								
Wetland Hyd	Irology Indicators	:							
Primary Indic	<u>ators (minimum of</u>	one is required	d; check all that	apply)		Seco	ndary Indicators	<u>s (minimum of t</u>	two required)
Surface \	Nater (A1)		Salt Crust	(B11)		V	Vater Marks (B	1) (Riverine)	
High Wa	ter Table (A2)		Biotic Crus	st (B12)			Sediment Depos	sits (B2) (River	ine)
Saturatio	n (A3)		Aquatic In	vertebrates (B1	3)		Drift Deposits (B	3) (Riverine)	
Water Ma	arks (B1) (Nonrive	rine)	Hydrogen	Sulfide Odor (C	C1)		Drainage Patterr	ns (B10)	
Sedimen	t Deposits (B2) (No	nriverine)		Rhizospheres of		oots (C3)	Dry-Season Wa	ter Table (C2)	
Dhit Dep	OSIIS (B3) (NONTIVE	rine)	Presence	Of Reduced in	n (C4) Tilled Seil		Crayfish Burrow	s (UX) a an Aarial Imr	
	Soli Clacks (BO)	Imageny (B7)	Recent ind		Tilled Sol		Shallow Aquitar		agery (C9)
Water-St	ained Leaves (B9)		Other (Ex	olain in Remark	s)	e	AC-Neutral Tes	st (D5)	
Field Obser	ations:				,	·			
Surface Wate	er Present? Y	es	No X	Depth (inches)					
Water Table	Present? Y	es		Depth (inches)	:				
Saturation Pr	esent? Y	es	No X	Depth (inches)	:	Wetland Hydr	ology Present	? Yes	No X
				• • • •		-	•••		

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Badger	Mountain Sola	ar			City/Co	unty: Doug	las Cour	nty		Sampli	ng Date:	4/20/2	2021
Applicant/Owner:	Avangrid							State:	WA	Samplii	ng Point:	WT	-242
Investigator(s): Jessi	ca Taylor/Kati	ie Pyne/s	Sara Frank		Section,	Township,	Range:						
Landform (hillside, te	errace, etc.): [Drainage			Local relief	(concave,	convex,	none): c	oncave		Slop	be (%):	8
Subregion (LRR):	LRR B	Lat:	47.470506°			Long:	-120.20	0335°			Datum:		
Soil Map Unit Name:	242: Morrow	-Argabal	complex, 8	to 15 percent	slopes			N	IWI classifi	cation: R	SUBH		
Are climatic / hydrolo	ogic conditions	s on the s	site typical fo	or this time of y	ear?	Yes X	No		(If no, exp	lain in Re	emarks.)		
Are Vegetation	, Soil,	or Hydro	ology	significantly dis	sturbed?	Are "Norma	al Circum	stances	" present?	Yes	X No	o	-
Are Vegetation	, Soil,	or Hydro	ology	naturally proble	ematic?	(If needed,	explain	any ansv	vers in Rer	narks.)			
SUMMARY OF I	FINDINGS	– Attac	ch site ma	ap showing	samplir	ng point	locatio	ons, tra	ansects,	import	ant feat	ures,	etc.
Hydrophytic Vegeta	tion Present?	Yes	N	o X	ls th	e Sampleo	d Area						
Hydric Soil Present	?	Yes	N	o X	with	in a Wetla	nd?	۱	res	No_	Х		
Wetland Hydrology	Present?	Yes	N	о <u>Х</u>									
Remarks:													
Drainage in wheatfi	eld. Bare soils	and roc	k. Does not	meet hydric cri	teria. Phot	o 241 in the	e wetland	d delinea	tion report				

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1		·		Number of Dominant Species That
2		·		Are OBL, FACW, or FAC: 1 (A)
3 4				Total Number of Dominant Species Across All Strata:3(B)
		=Total Cover		Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size: 15)			Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
1. Artemisia tridentata	40	Yes	UPL	
2.				Prevalence Index worksheet:
3.	_			Total % Cover of: Multiply by:
4.				OBL species 0 x 1 = 0
5.				FACW species 50 $x 2 = 100$
	40	=Total Cover		FAC species $0 \times 3 = 0$
Herb Stratum (Plot size: 5)		•		FACU species 0 x 4 = 0
1. Agropyron cristatum	50	Yes	UPL	UPL species 90 x 5 = 450
2. Phalaris arundinacea	50	Yes	FACW	Column Totals: 140 (A) 550 (B)
3.				Prevalence Index = $B/A = 3.93$
4.		- <u> </u>		
5.	_			Hydrophytic Vegetation Indicators:
6.				Dominance Test is >50%
7.		- <u> </u>		Prevalence Index is ≤3.0 ¹
8.	_	·		Morphological Adaptations ¹ (Provide supporting
	100	=Total Cover		data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)	-		Problematic Hydrophytic Vegetation ¹ (Explain)
1				¹ Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
		=Total Cover		Hydrophytic Vegetation
% Bare Ground in Herb Stratum 15 %	Cover of Bio	tic Crust	_	Present? Yes No X
Remarks:				

Depth	Matrix		Redo	x Featur	res				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 3/3	100					Loamy/Clayey	silt loam	
Type: C=Co	ncentration, D=Deplet	ion, RM=	Reduced Matrix, C	S=Cove	ered or C	pated Sa	and Grains. ² Loca	ation: PL=Pore Lining, M=Matr	ix.
ydric Soil I	ndicators: (Applicabl	e to all L	RRs, unless othe	rwise n	oted.)		Indicato	rs for Problematic Hydric Soi	ls ³ :
Histosol ((A1)		Sandy Red	dox (S5)			1 cm	Muck (A9) (LRR C)	
Histic Ep	ipedon (A2)		Stripped N	latrix (S	6)		2 cm	Muck (A10) (LRR B)	
Black His	stic (A3)		Loamy Mu	cky Min	eral (F1)		Iron-	Manganese Masses (F12) (LRI	R D)
Hydroger	າ Sulfide (A4)		Loamy Gle	eyed Ma	trix (F2)		Redu	iced Vertic (F18)	
Stratified	Layers (A5) (LRR C)		Depleted N	Иatrix (F	3)		Red	Parent Material (F21)	
1 cm Muo	ck (A9) (LRR D)		Redox Dar	k Surfac	ce (F6)		Very	Shallow Dark Surface (F22)	
Depleted	Below Dark Surface (/	A11)	Depleted [Jark Sur	face (F7)		Othe	r (Explain in Remarks)	
Thick Da	rk Surface (A12)		Redox Dep	pression	s (F8)				
Sandy M	ucky Mineral (S1)								
Sandy Gl	eyed Matrix (S4)	³ Indicato	rs of hydrophytic v	egetatio	n and we	tland hy	drology must be prese	ent, unless disturbed or problen	natic.
	aver (if abcorved);								
kestrictive L	ayer (il observeu).								
Type:	ayer (il observed).								
Type: _ Depth (in Remarks:	ches):						Hydric Soil Presen	t? Yes N	10 <u></u>
Type: _ Depth (in Remarks:	ches):						Hydric Soil Presen	t? Yes N	10
Type: Depth (in Remarks:	ches):						Hydric Soil Presen	t? Yes N	4o
Type: Depth (in Remarks: YDROLO	GY		ed: check all that a				Hydric Soil Presen	t? Yes N	
Type: Depth (in Remarks: YDROLO Vetland Hyd Primary Indic Surface \	GY rology Indicators: ators (minimum of one Vater (A1)	<u>∍ is requir</u>	<u>ed; check all that a</u>	<u>apply)</u> (B11)			Hydric Soil Presen	t? Yes N	lo
Type: _ Depth (in Remarks: YDROLO Vetland Hyd Primary Indic Surface V High Wat	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2)	is requir	red; check all that a solution of the second	<u>эрріу)</u> (В11) ;t (В12)			Hydric Soil Presen	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine)	lo
Type: _ Depth (in Remarks: YDROLO Vetland Hyd Primary Indic Surface V High Wat Saturatio	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3)	∍ is requir	<u>'ed; check all that a</u> Salt Crust Biotic Crust	apply) (B11) ;t (B12) /ertebra	tes (B13)		Hydric Soil Presen	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine)	lo
YDROLO Primary Indic Saturatio Water Ma	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine	≥ is requir	<u>ed; check all that a</u> Salt Crust Biotic Crust Aquatic Inv Hydrogen	apply) (B11) :t (B12) /ertebra Sulfide (tes (B13) Ddor (C1)	Hydric Soil Presen	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)	No
Type: Depth (in Remarks: YDROLO Yetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen	GY rology Indicators: ators (minimum of one Vater (A1) rer Table (A2) n (A3) arks (B1) (Nonriverine : Deposits (B2) (Nonriv	≥ is requir >) verine)	<u>ed; check all that a</u> Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F	apply) (B11) it (B12) /ertebra Sulfide (thizosph	tes (B13) Ddor (C1 ieres on l) iving R	Hydric Soil Presen	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)	equir
Type: Depth (in Remarks: YDROLO Vetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Dep	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine : Deposits (B2) (Nonriverine	<u>⇒ is requir</u> ⇒) verine) e)	<u>red; check all that a</u> Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc	tes (B13) Ddor (C1 ieres on l ced Iron () iving R C4)	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)	lo
Type:	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine : Deposits (B2) (Nonriverine Soits (B3) (Nonriverine Soil Cracks (B6)	∍ is requir ∍) verine) e)	<u>ed; check all that a</u> Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc	tes (B13) Ddor (C1 ieres on l ced Iron (ction in Ti) .iving R C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery	νο <u></u>
YDROLO YDROLO YDROLO YDROLO YURANA YDROLO Yotland Hyd Primary Indic Surface V High Wate Saturatio Water Ma Sediment Drift Dep Surface S Inundatio	GY rology Indicators: ators (minimum of one Vater (A1) rer Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima	≥ is requir ≥) verine) e) agery (B7	<u>ed; check all that a</u> Salt Crust Biotic Crust Aquatic Im Hydrogen Oxidized F Presence o Recent Iro	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface	tes (B13) Ddor (C1 ieres on l ced Iron (ction in Ti e (C7)) _iving R _C4) lled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery tow Aquitard (D3)	No requir γ (C9)
Type: Depth (in Remarks: YDROLO Yetland Hyd Yormary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Depu Surface S Inundatio Water-St	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9)	 ⇒ is requir ⇒) verine) e) agery (B7) 	<u>ed; check all that a</u> Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface Jain in F	tes (B13) Ddor (C1 eres on l ced Iron (tion in Ti e (C7) Remarks)) Living R C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) Neutral Test (D5)	v (C9)
Type: Depth (in Remarks: TyDROLO YDROLO Vetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ	GY rology Indicators: ators (minimum of one Vater (A1) rer Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) ations:	⇒ is requir ⇒) iverine) e) agery (B7	<u>ed; check all that a</u> Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface ilain in F	tes (B13) Ddor (C1 ieres on l ced Iron (ction in Ti e (C7) Remarks)) Living R (C4) Illed Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) -Neutral Test (D5)	lo equir γ (C9)
Type:	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) ations: r Present? Yes	≥ is requir >) verine) e) agery (B7	red; check all that a Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp No X	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface lain in F	tes (B13) Odor (C1 eres on l ced Iron (tion in Ti e (C7) Remarks) nches):) Living R (C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) -Neutral Test (D5)	No
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wate Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Wate Nater Table I	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) ations: er Present? Yes Present? Yes	≥ is requir >) iverine) agery (B7	<u>red; check all that a</u> Salt Crust Biotic Crust Aquatic Im Hydrogen Oxidized R Presence o Recent Iro Thin Muck Other (Exp No X No X	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface lain in F Depth (i Depth (i	tes (B13) Odor (C1 ieres on l ced Iron (tion in Ti e (C7) Remarks) nches): _ nches): _) _iving R (C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) -Neutral Test (D5)	No requir
Type:	GY rology Indicators: ators (minimum of one Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) rations: rr Present? Yes Present? Yes Present? Yes	is requir is requir iverine) agery (B7	red; check all that a Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp No X No X No X	apply) (B11) (B11) (B12) vertebra Sulfide (hizosph of Reduc Surface blain in F Depth (i Depth (i Depth (i	tes (B13) Ddor (C1 eres on l ced Iron (tion in Ti ction in Ti c(C7) Remarks) nches): _ nches): _ nches): _) Living R C4) Iled Soil	Hydric Soil Presen	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) Neutral Test (D5) gy Present? Yes N	<u>νο</u> requir γ (C9)
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wate Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Wate Vater Table I Saturation Prr includes cap	GY rology Indicators: ators (minimum of one Vater (A1) rer Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) rations: r Present? Yes Present? Yes esent? Yes esent? Yes esent? Yes esent? Yes	is requir is requir iverine) agery (B7	red; check all that a Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp No X	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface plain in F Depth (i Depth (i	tes (B13) Ddor (C1 eres on l ced Iron (tion in Ti e (C7) Remarks) nches): _ nches): _ nches): _) Living R (C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery low Aquitard (D3) -Neutral Test (D5) gy Present? Yes N	<u>νο</u> requir ν (C9)
Type: Depth (in Remarks: TYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pro (includes cap Describe Rec	GY rology Indicators: ators (minimum of one Nater (A1) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) rations: r Present? Yes Present? Ye	≥ is requir >) iverine) agery (B7 auge, mo	red; check all that a Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp No X No X No X No X No X No X No No X X X	apply) (B11) st (B12) vertebra Sulfide (hizosph of Reduc n Reduc Surface blain in F Depth (i Depth (i Depth (i	tes (B13) Odor (C1 leres on l ced Iron (ction in Ti ction in Ti c) Living R (C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) -Neutral Test (D5) gy Present? Yes N	<u>ν</u> (C9)
Type:	GY rology Indicators: ators (minimum of one Nater (A1) ier Table (A2) n (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) n Visible on Aerial Ima ained Leaves (B9) rations: Present? Yes Present? Yes esent? Yes esent? Yes illary fringe) orded Data (stream ga	≥ is requir >) iverine) agery (B7	red; check all that a Salt Crust Biotic Crust Aquatic Im Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp No X No X No X No X No X No No X No No X No X	apply) (B11) st (B12) vertebra Sulfide (thizosph of Reduc n Reduc Surface blain in F Depth (i Depth (i Depth (i	tes (B13) Odor (C1 eres on l ced Iron (ction in Ti e (C7) Remarks) nches): nches): nches):) _iving R (C4) Iled Soil	Hydric Soil Present	t? Yes N ry Indicators (minimum of two r er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery ow Aquitard (D3) -Neutral Test (D5) gy Present? Yes N	<u>νο</u> requir ν (C9)

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region

See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Badger	Project/Site: Badger Mountain Solar			City/County: Douglas County				Sampling Date:	4/20/2	2021
Applicant/Owner:	Avangrid					State:	WA	Sampling Point:	WT-	332
Investigator(s): Jessi	ica Taylor/Ka	tie Pyne/Sara Frank	Sectior	n, Township,	Range:	23N, 21	E, 34			
Landform (hillside, te	errace, etc.):		Local relie	ef (concave,	convex, r	none) <u>: Co</u>	oncave	Slop	e (%):	5
Subregion (LRR):	LRR B	Lat: <u>47.458279</u>		Long:	120.197	609		Datum:	10	
Soil Map Unit Name:	68: Broada	-Morrow-Spofford C	omplex, 3 to 8 percent sl	opes		N	WI classifi	cation: None		
Are climatic / hydrolo	ogic conditior	is on the site typical	for this time of year?	Yes <u>x</u>	No		(If no, expl	lain in Remarks.)		
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	Are "Norma	al Circum	stances	" present?	Yes <u>x</u> No		
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	(If needed,	explain a	any answ	vers in Rer	narks.)		
		A 44 a a la a 14 a un			1 41 -					

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No <u>x</u>	Is the Sampled Area		
Hydric Soil Present?	Yes	No x	within a Wetland?	Yes	No <u>x</u>
Wetland Hydrology Present?	Yes	No x			

Remarks:

Low spot at the edge of the wheat field, near the project area boundary where the ground has not been tilled or planted. Soils are sandy/rocky. The soils are fairly damp due to recent snowmelt but not saturated and no pooling of water was observed.

VEGETATION – Use scientific names of plants.

		Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	_	% Cover	Species?	Status	Dominance Test worksheet:
1					Number of Dominant Species That
2					Are OBL, FACW, or FAC: 0 (A)
3					Total Number of Dominant Species
4					Across All Strata: 1 (B)
	-		=Total Cover		Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size:)				Are OBL, FACW, or FAC: 0.0% (A/B)
1					
2					Prevalence Index worksheet:
3					Total % Cover of: Multiply by:
4					OBL species 0 x 1 = 0
5					FACW species 0 x 2 = 0
			=Total Cover		FAC species 0 x 3 = 0
Herb Stratum (Plot size: 5)	-				FACU species 0 x 4 = 0
1. Agropyron cristatum		25	Yes	UPL	UPL species 30 x 5 = 150
2. Brassica nigra		5	No	UPL	Column Totals: 30 (A) 150 (B)
3.					Prevalence Index = B/A = 5.00
4.					
5.					Hydrophytic Vegetation Indicators:
6.					Dominance Test is >50%
7.					Prevalence Index is ≤3.0 ¹
8.					Morphological Adaptations ¹ (Provide supporting
		30	=Total Cover		data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)				Problematic Hydrophytic Vegetation ¹ (Explain)
<u> </u>	,				¹ Indicators of hydric soil and wetland hydrology must
2.					be present, unless disturbed or problematic.
			=Total Cover		Hydrophytic
	-				Vegetation
% Bare Ground in Herb Stratum 70	% Co	ver of Bioti	c Crust 0	_	Present? Yes No X
Remarks:					

Profile Desc	cription: (Describe t	o the depth	needed to doc Redo	ument tl	he indica	tor or o	confirm the a	bsence of indicator	s.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	loc^2	Textu	-A	Remarks	
		100		/0	туре	LUC		<u> </u>	Remarks	
0-18	10YR 3/2	100		·			sandy loa			
				·		······				
				·						
		<u> </u>		·						
¹ Type: C=C	oncentration, D=Depl	etion, RM=Re	educed Matrix, (CS=Cove	ered or C	pated S	and Grains.	² Location: PL=Po	ore Lining, M=	Matrix.
Hydric Soli	Indicators: (Applica	DIE TO AII LR	Rs, unless othe	erwise n	otea.)		1	ndicators for Proble		50115 °:
Histosol	(A1)		Sandy Re	dox (55)	0)		-	1 cm Muck (A9) (
	pipedon (A2)			latrix (Se	0)		_	2 cm Muck (A10)		
	Istic (A3)		Loamy Mu		eral (F1)		_	Iron-Manganese	Masses (F12)	(LRR D)
Hydroge	en Sulfide (A4)		Loamy Gl	eyed Ma	trix (F2)		_	Reduced Vertic (I	-18)	
Stratified	d Layers (A5) (LRR C	5)		Matrix (F	3)		_	Red Parent Mate	rial (F21)	-
1 cm Mu	uck (A9) (LRR D)		Redox Da	rk Surfac	ce (F6)		_	Very Shallow Dar	k Surface (F2	2)
Deplete	d Below Dark Surface	e (A11)	Depleted	Dark Sur	face (F7)		_	Other (Explain in	Remarks)	
Thick Da	ark Surface (A12)		Redox De	pression	s (F8)					
Sandy N	lucky Mineral (S1)	3								
Sandy G	Bleyed Matrix (S4)	Indicators	of hydrophytic v	egetatio	n and we	tland hy	ydrology must	be present, unless d	isturbed or pro	oblematic.
Restrictive	Layer (if observed):									
Type:			_							
Depth (i	nches):		_				Hydric Soil	Present?	Yes	No <u>x</u>
Remarks:										
HYDROLO	GY									
Wetland Hy	drology Indicators:									
Primary Indi	cators (minimum of o	ne is required	l; check all that	apply)				Secondary Indicators	(minimum of	two required)
Surface	Water (A1)		Salt Crust	(B11)			_	Water Marks (B1) (Riverine)	
High Wa	ater Table (A2)		Biotic Cru	st (B12)			_	Sediment Deposi	ts (B2) (River	ine)
Saturatio	on (A3)		Aquatic In	vertebra	tes (B13)	1	_	Drift Deposits (B3	B) (Riverine)	
Water N	larks (B1) (Nonriveri	ne)	Hydrogen	Sulfide (Odor (C1)	_	Drainage Pattern	s (B10)	
Sedime	nt Deposits (B2) (No n	riverine)	Oxidized F	Rhizosph	eres on l	_iving R	Roots (C3)	Dry-Season Wate	er Table (C2)	
Drift Dep	posits (B3) (Nonriver	ine)	Presence	of Redu	ced Iron ((C4)	_	Crayfish Burrows	(C8)	
Surface	Soil Cracks (B6)		Recent Irc	on Reduc	ction in Ti	lled Soi	ils (C6)	Saturation Visible	e on Aerial Ima	agery (C9)
Inundati	on Visible on Aerial Ir	magery (B7)	Thin Muck	Surface	e (C7)		_	Shallow Aquitard	(D3)	
Water-S	tained Leaves (B9)		Other (Ex	plain in F	Remarks)		_	FAC-Neutral Test	t (D5)	
Field Obser	vations:									
Surface Wat	er Present? Ye	S	No X	Depth (i	nches):					
Water Table	Present? Yes	s	No X	Depth (i	nches):		1			
Saturation P	resent? Yes	s	No X	Depth (i	nches):		Wetland I	Hydrology Present?	Yes	No X
(includes ca	oillary fringe)									
Describe Re	corded Data (stream	gauge, monit	oring well, aeria	I photos	, previous	s inspec	ctions), if avail	able:		
Remarks:										

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See FRDC/FL TR-07-24: the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

OCC LINE			onent ageney is		001		•	-		-	
Project/Site: Badger	[.] Mountain So	lar		City/C	County: Dougla	as Cour	nty		Sampling Da	ite: 4/2	0/2021
Applicant/Owner:	Avangrid						State:	WA	Sampling Po	int: N	/T-351
Investigator(s): Jess	ica Taylor/Ka	tie Pyne/Sara Fr	ank	Sectio	n, Township, F	Range:	23N, 21	E, 34			
Landform (hillside, to	errace, etc.):	Swale		Local rel	ief (concave, c	onvex, i	none): C	Concave		Slope (%): 5
Subregion (LRR):	LRR B	Lat: 47.4582	279		Long:	120.197	7609		Datu	ım:	
Soil Map Unit Name	: 68: Broadax	-Morrow-Spoffor	d complex, 3 to 8 p	percent sl	opes		Ν	IWI classif	ication: R5UBI	-	
Are climatic / hydrol	ogic conditior	is on the site typi	cal for this time of	year?	Yes x	No		(If no, exp	lain in Remark	s.)	
Are Vegetation	, Soil	, or Hydrology	significantly di	sturbed?	Are "Normal	Circum	stances	" present?	Yes x	No	
Are Vegetation	, Soil	, or Hydrology	naturally probl	ematic?	(If needed, e	explain a	any ansv	vers in Rei	marks.)		
SUMMARY OF	FINDINGS	– Attach site	e map showing	g samp	ling point l	ocatio	ons, tra	ansects,	important	feature	s, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology Remarks: Low spot at the edg	ation Present' t? v Present? ge of the whe	? Yes Yes Yes at field, near the	No x No x No X project area bound	ary.	the Sampled thin a Wetlan	Area d?		res	No <u>x</u>		
VEGETATION -	- Use sciel	ntific names	of plants.								
Tree Stratum	(Plot size)	Absolute % Cover	Dominar Species	nt Indicator ? Status	Dor	ninance	Test wor	ksheet:		
1 2.	(11010)20.	/		opooloo		Nur Are	nber of I OBL, F/	Dominant S ACW, or F	Species That AC:	0	(A)
3 4						Tota Acre	al Numb oss All S	er of Domi Strata:	nant Species	1	(B)
<u>Sapling/Shrub Stra</u> 1.	<u>tum</u> (P	lot size:)=`	Total Cov	ver	Per Are	cent of [OBL, F/	Dominant S ACW, or F	Species That AC:	0.0%	(A/B)

Sapling/Shrub Stratum (Plot size:)				Are OBL, FACW,	or FAC:	_	0.0%	(A/B)
1.								
2.				Prevalence Inde	x worksh	eet:		
3.				Total % Cov	ver of:	1	/ultiply by	/:
4.				OBL species	0	x 1 =	0	
5.			<u> </u>	FACW species	0	x 2 =	0	_
		=Total Cover	<u> </u>	FAC species	0	x 3 =	0	_
Herb Stratum (Plot size: 5)				FACU species	0	x 4 =	0	_
1. Triticum aestivum	100	Yes	UPL	UPL species	100	x 5 =	500	
2.				Column Totals:	100	(A)	500	(B)
3.				Prevalence In	dex = B/A	<u>م</u> = ا	5.00	
4.								_
5.				Hydrophytic Vegetation Indicators:				
6.				Dominance Test is >50%				
7.				Prevalence li	ndex is ≤3	8.0 ¹		
8.				Morphologica	al Adaptat	ions ¹ (Prov	ide suppc	orting
	100	=Total Cover		data in Re	marks or	on a separ	ate sheet)
Woody Vine Stratum (Plot size:)				Problematic	Hydrophyt	tic Vegetat	on ¹ (Expl	ain)
1				¹ Indicators of hyd	ric soil an	d wetland	hydrology	must
2				be present, unles	s disturbe	ed or proble	matic.	
		=Total Cover		Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 5 % C	over of Bio	otic Crust 0	_	Present?	Yes	No	Х	
Remarks:								

cohes Color (moist) % Color (moist) % Cype Loc ² Texture Remarks 0-16 10YR 3/3 100	Depth	Matrix		Redo	ox Featur	es					
6-16 10YR 3/3 100 Leamy/Clayey Sitty leam	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered of Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, Matrix, CS=Covered of Coated Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered of Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, CS=Covered of Coated Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered of Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, CS=Covered of Coated Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, (SS)	0-16	10YR 3/3	100					Loamy/Clayey		Silty loam	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ?Location: PL=Pore Lining, M=Matrix, Yetris Solite*: yrdric Solit Indicators: Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solite*: Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR G) Black Histic (A3) Loarny Mucky Mineral (F1) Indicators for Problematic Hydric Solite*: Hydrogen Suifie (A4) Loarny Gleyed Matrix (F2) Redoxed Venic (F16) Stratilid Layers (A5) (LRR C) Depleted Matrix (F3) Red Parent Mataria (F21) Depleted Below Dark Suiface (A11) Depleted Matrix (F3) Red Parent Mataria (F21) Depleted Below Dark Suiface (A11) Depleted Depressions (F8) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (R4) *Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic structure Layer (f16 bearwed): Ype: 'Type:											
ype: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining. M=Matrix. yrdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils? Histos Eppedon (A2) Stripped Matrix (S6) 1 cm Muck (A10) (LRR D) Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LRR D) Hydrogen Sulfide (A4) Leamy Gleyed Matrix (F2) Reduce Vartic (F18) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Reduce Vartic (F18) Depleted Matrix (A10) Redox Dark Surface (F2) Reduce Vartic (F18) Stratified Layers (A5) (LRR O) Redox Depressions (F8) Other (Explain in Remarks) Sandy Cleyed Matrix (S1) Papieted Dark Surface (F7) Other (Explain in Remarks) Sandy Cleyed Matrix (S1) *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic estrictive Layer (If observed): Type: Type:											
ype: C=Concentration. D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix, Yrife Soli Mictators for Poblematic Hydric Solis?; Histosi (A1) Sandy Redox (S5) Indicators for Problematic Hydric Solis?; Histosi (A1) Straped Matrix (S6) 2 cm Muck (A10) (LRR 0) Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LRR 0) Pack Histic (A3) Loamy Gleyed Matrix (F2) Red/Leader Vertic (F18) Stratified Layers (A5) (LRR 0) Depleted Matrix (F3) Red Parent Material (F21) I om Muck (A0) (LRR 0) Redex Dark Surface (F61) Other (Explain in Remarks) Thick Dark Surface (A11) Depleted Dark Surface (F77) Other (Explain in Remarks) Sandy Micky (Mineral (S1) Redox Dark Surface (F77) Other (Explain in Remarks) Sandy Micky Mineral (S1) Redox Dark Surface (F77) Other (Explain in Remarks) Sandy Micky Mineral (S1) Sati Crust (S11) Water Marks (S1) (Northere (S12) Sandy Micky (S4) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic stricture (S14) Saturation (A3) Apuatic Invertebrates (S13) No Saturation (A3) Apuatic Invertebrates (S13) Drift Deposits (S3) (Riverine) <td></td>											
ype: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. yric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils *: Histic Epledon (A2) Stripped Matrix. (S6)											
ype: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix, ydric Soli Res, unless otherwise noted.) Histics (A) Sandy Redox (S5) Indicators for Problematic Hydric Solis*: Histics (A) Lamm Muck (MA) (LRR C) Black Histic (A3) Lamm Muck (MM) (LRR C) Hydrogen Sulfide (A4) Lammy Glayed Matrix (F2)					·						
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Indicators of Problematic Hydric Soils ¹ : Histosol (A1)											
ype: C-Concentration, D-Depletion, RM=Reduced Matrix, CS-Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epigedon (A2) Sandy Redox (S5) I off Muck (A9) (LRR C) Histic Epigedon (A2) Sandy Redox (S5) I off Muck (A9) (LRR C) Histic Epigedon (A2) Loamy Mucky Mineral (F1) I ron-Manganese Masses (F12) (LRR D) Hydrogen Suffield (A4) Loamy Gleyed Matrix (F2) Red Veric (F18) Red Veric (F18) Stratified Layers (A5) (LRR D) Redox Dark Surface (F6) Very Shallow Dark Surface (F2) Depleted Bairk Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic setrictive Layer (if Observed): Type: Vpe: Medicators (Ininimum of one is required: check all that apply) Secondary Indicators (Ininimum of two requi Surface Water (A1) Satic Crust (B11) Water Marks (B1) (Riverine) Surface Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Dydrogen Sufface (A12) Surface Water Table (A2) Biotic Crust (B12)											
Ype: C-Concentration, D-Depletion, RMR-Reduced Matrix, CS-Covered or Coated Sand Grains. PL-Pore Lining, M-Matrix, Yafri Soli Indicators for Problematic Hydric Solis ¹ : Ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solis ¹ : Histosol (A1) Sandy Redox (S5) 1 or Muck (A0) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LRR D) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Statified Layers (A5) (LRR C) Depleted Matrix (F3) Red Parent Material (F21) 1 or Muck (A0) (LRR D) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Standy Mucky Mineral (S1) Sandy Macky Mineral (S1) Sandy Macky Mineral (S1) Sandy Mucky Mineral (S1) Secondary Indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two required) Type: Depth (inches): Hydro Soli Present? Yes_ No_ Surface Marks (B1) (Norriverine) Hydroge Sufface Gray Drint Deposits (B3) (Norriverine) Drint Deposits (B3) (Norriverine) Drintapperations (C4) Drint Deposits (B3) (
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LRR D) Hydrogen Suffice (A4) Loamy Gleyed Matrix (F3) Red Zerent Material (F21) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Red Zerent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Very Shallow Dark Surface (F22) Depleted Below Dark Surface (A12) Redox Depressions (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic strictive Layer (If Observed): Type:	ype: C=Co	ncentration, D=De	epletion, RM=	Reduced Matrix, (CS=Cove	ered or C	oated S	and Grains. ² Loc	ation: PL=Po	e Lining, M=I	Matrix.
Histos (A1) Sandy Redox (S5) 1 or Muck (A9) (LRR C) Histo Epipedon (A2) Stripped Matrix (S6) 2 or Muck (A9) (LRR C) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Inon-Manganese Masses (F12) (LRR D) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F2) Reduced Vertic (F18) Stratified Layers (A5) (LRR C) Depleted Matrix (F2) Red Parent Material (F21) 1 or Muck (A9) (LRR D) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S3) *indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic estrictive Layer (If observed): Type: No Type: Depth (inches): No	ydric Soil I	ndicators: (Appli	cable to all L	RRs, unless oth	erwise n	oted.)		Indicato	ors for Proble	natic Hydric	Soils ³ :
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LRR D) Stratified Layers (A5) (LRR C) Depleted Matrix (F2) Reduced Vertic (F18) Stratified Layers (A5) (LRR C) Depleted Matrix (F2)	Histosol	(A1)		Sandy Re	dox (S5)			1 cr	n Muck (A9) (L	RR C)	
Black Histic (A3) Loamy Mucky Mineral (F1) Inon-Manganese Masses (F12) (LRR 0) Hydrogen Suffide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Stratified Layers (A5) (LRR 0) Depleted Matrix (F3) Red Parent Material (F21) 1 cm Muck (A9) (LR 0) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) ¹ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic estrictive Layer (if observed): Type: Depth (inches):	Histic Ep	ipedon (A2)		Stripped N	/latrix (Se	5)		2 cr	n Muck (A10) (LRR B)	
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Stratified Layers (A6) (LRR C)	Hydroge	n Sulfide (A4)		Loamy Gl	eyed Ma	trix (F2)		Red	uced Vertic (F	18)	
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Very Shallow Dark Surface (F22) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) 3 ¹ ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic estrictive Layer (if observed): Type:	Stratified	Layers (A5) (LRR	(C)	Depleted	Matrix (F	3)		Red	Parent Materi	al (F21)	
Depieted Below Dark Surface (A11) Depieted Dark Surface (A12) Conter (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic setrictive Layer (if observed): Type: Type: Depth (inches): Beth (inches): Hydric Soil Present? emarks: Secondary Indicators (minimum of noe is required; check all that apply) Surface Water (A1) Salt Crust (B11) Sturface Water (A1) Salt Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Saturation (A3) Aquatic Invertebrates (B13) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Surface Site (B3) (Nonriverine) Origina Recent Iron Reduced Iron (C4) Surface Site (B4) Check Surface (C7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Marks (B4) No Xuration Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Inundation Present?<	1 cm Mu	ck (A9) (LRR D)	(Redox Da	rk Surfac	xe (⊢6)		Ver	/ Shallow Dark	Surface (F22	2)
Inter Dark Sufface (A12)	Depieted	Below Dark Surra	ice (A11)	Depleted	Dark Sur			Othe	er (Explain in F	(emarks)	
		rk Surface (A12)		Redox De	pression	s (F8)					
	Sandy G	loved Matrix (S4)	³ Indicato	rs of hydrophytic y	voqotatio	n and wa	tland b	udrology must be pros	ont unloss dis	turbod or pro	blomatic
Type:					regetatio			yarology mast be pres			Dicinatio
Hydric Soil Present? Yes No emarks:		ayer (if observed	l):								
Depth (incles). If your soin Present? If so	Type.	abaa):						Hudria Sail Brass	42	Vaa	No
emarks: fOROLOGY fettand Hydrology Indicators: imary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) _Surface Water (A1) _Salt Crust (B11) _Water Marks (B1) (Riverine) _High Water Table (A2) _Biotic Crust (B12) _Sediment Deposits (B2) (Riverine) _Saturation (A3) _Aquatic Invertebrates (B13) _Drift Deposits (B2) (Riverine) _Water Marks (B1) (Nonriverine) _Hydrogen Sulfide Odor (C1) _Drainage Patterns (B10) _Sediment Deposits (B2) (Nonriverine) _Oxidized Rhizospheres on Living Roots (C3) _Dry-Season Water Table (C2) _Drift Deposits (B3) (Nonriverine) _Presence of Reduced Iron (C4) _Crayfish Burrows (C8) _Surface Soli Cracks (B6) _Recent Iron Reduction in Tilled Soils (C6) _Staturation Visible on Aerial Imagery (C9 _Inundation Visible on Aerial Imagery (B7) _Thin Muck Surface (C7) _Shallow Aquitard (D3) _Water-Stained Leaves (B9) _Other (Explain in Remarks) _FAC-Neutral Test (D5) elf Observations:	Deptii (ii							Hydric Soli Freser	11 :	165	NU
YDROLOGY fettand Hydrology Indicators: rimary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9 Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) ield Observations: urface Water Present? Yes No X Depth (inches): rudation Present? Yes No X Depth (inches): No vaturation Present? Yes No <	contanto.										
YDROLOGY /etiand Hydrology Indicators: rimary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9 Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Table Present? Yes No X Iddobservations: Vater Table Present? Yes No urface Water Present? Yes No X Depth (inches): Yes No iddobservations: Vesting Present? Yes No X											
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Vetland Hydrology Indicators: Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) (Riverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C2) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Vater Present? Yes No X urface Water Present? Yes No X No X Depth (inches): Wetland Hydrology Present? Yes No urdace capillary fringe) exercible Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: marks:	YDROLO	GY									
rimary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Table Present? Yes No X urface Water Present? Yes No X No X Depth (inches): Wetland Hydrology Present? Yes No urface Water Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No ucludes capillary fringe) escribe Recorde	etland Hyc	Irology Indicators	6:								
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9 Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Present? Yes No X urface Water Present? Yes No X No X Depth (inches): Wetland Hydrology Present? Yes No aturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: marks: Model Model	rimary Indic	ators (minimum of	one is requir	ed; check all that	apply)			Seconda	ary Indicators (minimum of t	wo requir
High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9 Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Present? Yes No X urface Water Present? Yes No X aturation Present? Yes No X No X Depth (inches): Wetland Hydrology Present? Yes No Acutation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Meanarks: Meanarks:	Surface	Water (A1)		Salt Crust	(B11)			Wat	er Marks (B1)	(Riverine)	
Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) eld Observations: Inface Water Present? Yes No aturation Present? Yes No X Depth (inches): Mo aturation Present? Yes No X Depth (inches): Mo acturation Present?	High Wa	ter Table (A2)		Biotic Cru	st (B12)			Sed	iment Deposits	s (B2) (Riveri	ne)
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) eld Observations: No X Depth (inches): urface Water Present? Yes No X Depth (inches): aturation Present? Yes No X Depth (inches): No acturation Present? Yes No X Depth (inches): No excludes capillary fringe) <t< td=""><td>Saturatio</td><td>n (A3)</td><td></td><td>Aquatic In</td><td>vertebra</td><td>tes (B13)</td><td></td><td>Drift</td><td>Deposits (B3)</td><td>(Riverine)</td><td></td></t<>	Saturatio	n (A3)		Aquatic In	vertebra	tes (B13)		Drift	Deposits (B3)	(Riverine)	
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) eld Observations: No X Depth (inches): ater Table Present? Yes No X Depth (inches): aturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No acturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No acturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No acturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No acturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes	Water Mater Mater	arks (B1) (Nonrive	erine)	Hydrogen	Sulfide (Odor (C1)	Drai	nage Patterns	(B10)	
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) eld Observations:	Sedimen	t Deposits (B2) (N	onriverine)	Oxidized I	Rhizosph	eres on l	_iving R	Roots (C3) Dry-	Season Water	Table (C2)	
Surface Soil Cracks (B6)Recent Iron Reduction in Tilled Soils (C6)Saturation Visible on Aerial Imagery (C9	Drift Dep	osits (B3) (Nonriv	erine)	Presence	of Redu	ced Iron ((C4)	Cra	/fish Burrows (C8)	
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) ield Observations: Image: Comparison of the test in test in test in test in the test in test i	Surface	Soil Cracks (B6)		Recent Irc	on Reduc	tion in Ti	lled Soi	ls (C6) Satu	aration Visible	on Aerial Ima	gery (C9
	Inundatio	n Visible on Aeria	I Imagery (B7	Thin Muck	Surface	e (C7)		Sha	llow Aquitard (D3)	
ield Observations: urface Water Present? Yes No X Depth (inches):	Water-St	ained Leaves (B9)		Other (Ex	plain in F	(emarks		FAC	C-Neutral Test	(D5)	
urface Water Present? Yes No X Depth (inches):	ield Observ	vations:									
/ater Table Present? Yes No X Depth (inches): aturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No ncludes capillary fringe) escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	urface Wate	er Present?	Yes	No <u>X</u>	Depth (i	nches):					
aturation Present ? Yes <u>No X</u> Depth (inches): <u>Wetland Hydrology Present ? Yes</u> <u>No</u> ncludes capillary fringe) escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	/ater Table	Present?	res	No <u>X</u>	Depth (i	nches):				M-	
escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	aturation Pr	esent?	res	No <u>X</u>	Depth (i	nches):		Wetland Hydrold	gy Present?	Yes	NO
escribe recorded Data (siteam gauge, monitoring well, aenai priotos, previous inspections), il available:	nciudes cap	mary tringe)	m douldo		l nhotoc	proview	inone	tione) if availables			
emarks:	escribe Rec	orded Data (střea	m gauge, mo	moning well, aeria	n priotos	, previous	sinspeo	suons), ii avaliable:			
	omarke										
	iriy damp s		SHOWINGIL								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24: the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-07-24; the propor	nent agency is	SCECW-0	CO-R	(Authority: AR	335-15, paragr	aph 5-2a)	
Project/Site: Badger Mountain Solar		City/Cou	nty: Douglas	s County	Sampling Da	te: 4/21/	2021
Applicant/Owner: Avangrid				State: WA	Sampling Poi	nt: WT	-381
Investigator(s): Jessica Taylor/Katie Pyne/Sara Fran	k	Section.	Fownship, Ra	ange: 23N. 21E. 34			
Landform (hillside, terrace, etc.):		 Local relief ((concave, co	nvex, none): Concave	:	Slope (%):	5
Subregion (LRR): LRR B Lat: 47.458279)		Long: 1	20.197609	Datu	m: NAD	83
Soil Map Unit Name: 224: Logy very stony sandy loa	am, 3 to 15 perce	nt slopes		NWI classifi	cation: R3UBH	1	
Are climatic / hydrologic conditions on the site typica	I for this time of y	/ear?	Yes x	No (If no, exp	lain in Remarks	s.)	
Are Vegetation , Soil , or Hydrology	significantly dis	sturbed? A	re "Normal (Circumstances" present?	Yes x	No	
Are Vegetation . Soil . or Hydrology	 naturally proble	ematic? (I	lf needed. ex	plain any answers in Rer	narks.)		-
SUMMARY OF FINDINGS – Attach site r	nan showing	samplin	a noint lo	cations transects	important f	eatures	etc
			g point io		Important I	catales	, 010.
Hydrophytic Vegetation Present? Yes	No <u>x</u>	Is the	e Sampled A	rea			
Hydric Soil Present? Yes	No <u>x</u>	withi	n a Wetland	? Yes	No <u>x</u>		
Wetland Hydrology Present? Yes	NO X						
Remarks: Stoop billsides load down to streambod. Chuckers f	flushed from near	r the area as	approch wa	as made to sample site	Photopoint 381	in the wot	land
delineation report.	iusneu nom nea		арргост ма	as made to sample site.		III the wet	lanu
VEGETATION - Use scientific names of	nlants						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wor	ksheet:		
1				Number of Dominant S	Species That		<i></i>
2				Are OBL, FACW, or FA	AC:	1	_(A)
3 4	·			Total Number of Domi Across All Strata	nant Species	4	(B)
· · · · · · · · · · · · · · · · · · ·		Fotal Cover		Percent of Dominant S	necies That		_(=)
Sapling/Shrub Stratum (Plot size: 5)			Are OBL, FACW, or F	AC:	25.0%	(A/B)
1. Artemisia tridentata	10	Yes	UPL				
2				Prevalence Index wo	rksheet:		
3				Total % Cover of:	N	Aultiply by:	
4				OBL species 0	x 1 =	0	-
5				FACW species 0	x 2 =	0	_
	10	Fotal Cover		FAC species 30	$x_{3} = -$	90	-
Herb Stratum (Plot size: 5)				FACU species 10	$x_{4} = -$	40	-
1. Bromus tectorum	10	Yes	UPL	UPL species 20	$x_{5} = -$	100	-
2. Leymus cinereus		Yes	FAC	Column Totals: 60) (A) _	230	_(B)
3. Bromus arvensis	10	Yes	FACU	Prevalence Index =	= B/A =	3.83	-
4			·		on Indicators:		
o							
7					is <3 0 ¹		
8	·			Morphological Ada	no =0.0	ide suppor	tina

50 =Total Cover

% Cover of Biotic Crust

=Total Cover

0

worphological Adaptations (Fronde Supporting	
data in Remarks or on a separate sheet)	

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydronhytic	
nyaropnyao	
Vegetation	
Vegetation	

Yes

Present?

Remarks:

1.

2.

Woody Vine Stratum

(Plot size:

50

% Bare Ground in Herb Stratum

Depth Matrix Redox Features (inches) Color (moist) % Type1 Loc2 Texture Remarks 0-6 10YR 4/3 100	
O-6 10YR 4/3 100 76 Type Loc Texture Remains 0-6 10YR 4/3 100	
0-6 10YR 4/3 100 Sandy Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix	rix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soil	ils ³ :
Histosol (A1)Sandy Redox (S5)1 cm Muck (A9) (LRR C)	
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B)	
Black Histic (A3) Loamy Mucky Mineral (F1) Iron-Manganese Masses (F12) (LR	RD)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18)	
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Red Parent Material (F21)	
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Very Shallow Dark Surface (F22)	
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)	
Thick Dark Surface (A12) Redox Depressions (F8)	
Sandy Mucky Mineral (S1)	
Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problem	natic.
Restrictive Layer (if observed):	
Type:bedrock	
Depth (inches): 6 Hydric Soil Present? Yes I	No <u>x</u>
Remarks:	
soil very rocky and difficult to dig	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two	required)
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine)	<u>loquilou</u>
High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine)	
Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine)	
Water Marks (R1) (Nonriverine) Hvdrogen Sulfide Odor (C1) X Drainage Patterns (B10)	
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)	
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Cravfish Burrows (C8)	
	v (C9)
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagen	, /
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aguitard (D3)	
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5)	
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5)	
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes	
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes Water Table Present? Yes No X Depth (inches): No X Depth (inches):	

Saturation Present? (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no signs of water until slight dampness at 5 inches

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

untain Solar		City/County: Doug	y/County: Douglas County				4/21/2021		
vangrid					State:	WA	Sampling Point:	WT-382	
Taylor/Katie	Pyne/Sara Fran	k	Section, Township,	Range:	23N, 21	E, 34			
ce, etc.): <u>Dr</u>	rainage	La	cal relief (concave,	convex,	none): <u>C</u>	oncave	Slop	e (%): <u>10</u>	
RR B	Lat: 47.458279	1	Long:	120.19	7609		Datum:		
Soil Map Unit Name: 300: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes NWI classification: R3UBH									
conditions	on the site typica	I for this time of yea	ar? Yes <u>x</u>	No		(If no, expl	ain in Remarks.)		
Soil, c	or Hydrology	significantly distu	rbed? Are "Norma	al Circum	istances'	' present?	Yes <u>x</u> No)	
Soil, c	or Hydrology	naturally problem	natic? (If needed,	explain a	any answ	vers in Rem	arks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
n Present?	Yes Yes	No <u>x</u> No <u>x</u>	Is the Sampled within a Wetla	l Area nd?	١	′es	No <u>x</u>		
	Auntain Solar vangrid Taylor/Katie ce, etc.): Di RR B 00: Ritzville s conditions o Soil, c Soil, c NDINGS – n Present?	Auntain Solar Vangrid Taylor/Katie Pyne/Sara Frant Ice, etc.): Drainage RR B Lat: 47.458279 D0: Ritzville silt loam, cemente conditions on the site typica Soil, or Hydrology Soil, or Hydrology IDINGS – Attach site r Present? Yes Yes Second 2 Yes	vangrid Taylor/Katie Pyne/Sara Frank ce, etc.): Drainage Lat: 47.458279 20: Ritzville silt loam, cemented substratum, 30 f conditions on the site typical for this time of yea Soil , or Hydrology significantly distu Soil , or Hydrology n Present? Yes No x Yes No No x Yes No	vangrid City/County: Doug Taylor/Katie Pyne/Sara Frank Section, Township, ice, etc.): Drainage Local relief (concave, RR B Lat: 47.458279 Long: D0: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes conditions on the site typical for this time of year? Yes x Soil , or Hydrology significantly disturbed? Are "Normal Soil , or Hydrology naturally problematic? (If needed, NDINGS – Attach site map showing sampling point Is the Sampled within a Wetla n Present? Yes No x	Nuntain Solar City/County: Douglas Courty vangrid Taylor/Katie Pyne/Sara Frank Section, Township, Range: Ice, etc.): Drainage Local relief (concave, convex, convex, convex, convex, convex, convex) RR B Lat: 47.458279 Long: 120.192 D0: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes Conditions on the site typical for this time of year? Yes x No Soil , or Hydrology	vangrid City/County: Douglas County Taylor/Katie Pyne/Sara Frank Section, Township, Range: 23N, 21 rce, etc.): Drainage Local relief (concave, convex, none): C RR B Lat: 47.458279 Long: 120.197609 20: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes No sc conditions on the site typical for this time of year? Yes x No Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" Soil , or Hydrology naturally problematic? (If needed, explain any answ NDINGS - Attach site map showing sampling point locations, tra No X n Present? Yes No X Yes No X Is the Sampled Area within a Wetland? Yes Yes	vangrid City/County: Douglas County vangrid State: WA Taylor/Katie Pyne/Sara Frank Section, Township, Range: 23N, 21E, 34 ice, etc.): Drainage Local relief (concave, convex, none): Concave RR B Lat: 47.458279 Long: 120.197609 D0: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes NWI classific conditions on the site typical for this time of year? Yes	nuntain Solar City/County: Douglas County Sampling Date: vangrid State: WA Sampling Point: Taylor/Katie Pyne/Sara Frank Section, Township, Range: 23N, 21E, 34 Sampling Point: Taylor/Katie Pyne/Sara Frank Section, Township, Range: 23N, 21E, 34 Solar ice, etc.): Drainage Local relief (concave, convex, none): Concave Slop RR B Lat: 47.458279 Long: 120.197609 Datum: D0: Ritzville silt loam, cemented substratum, 30 to 65 percent slopes NWI classification: R3UBH Sconditions on the site typical for this time of year? Yes	

Remarks:

Steep hillsides lead down to streambed. High stream walls with abundant rock exposure. Photopoints 382a and 382b in wetland delineation report.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) % Cover Species? Status Dominance Test worksheet: 1.		Absolute	Dominant	Indicator					
1.	Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:				
2. Are OBL, FACW, or FAC: 0 (A) 3.	1				Number of Dominant Species That				
3.	2				Are OBL, FACW, or FAC:	0	(A)		
4.	3				Total Number of Dominant Species				
Sapling/Shrub Stratum (Plot size: 5)	4				Across All Strata:	4	(B)		
Saping/Shrub Stratum (Plot size: 5) 1. Artemisia tridentata 5 Yes UPL 2.		、 	=Total Cover		Percent of Dominant Species That	0.00/			
1. Artemisia indentata 5 Yes UPL 2.	Sapling/Shrub Stratum (Plot size: 5	_) _			Are OBL, FACW, or FAC:	0.0%	_(A/B)		
2.		5	Yes	UPL	Duran la marchada a su da su a su da s				
3.	2.		·		Prevalence Index worksneet:				
4.	3.				I otal % Cover of:	Multiply by	/:		
5.	4		·		OBL species 0 x 1 =	0	_		
S =Total Cover FAC species 0 x 3 = 0 Herb Stratum 10 Yes UPL UPL species 25 x 5 = 125 2. Pseudoroegneria spicata 10 Yes UPL UPL species 25 x 5 = 125 3. Bromus arvensis 5 Yes FACU Prevalence Index = B/A = 4.83 4.	5				FACW species 0 x 2 =	0	_		
Herb Stratum (Plot size:5) FACU species5X 4 =0 1. Bromus tectorum 10 Yes UPL 2. Pseudoroegneria spicata 10 Yes UPL 3. Bromus arvensis 5 Yes FACU 4.		5	=Total Cover		FAC species 0 x 3 =	0	_		
1. Bromus tectorum 10 Yes UPL UPL species 25 x 5 = 125 2. Pseudoroegneria spicata 10 Yes UPL Column Totals: 30 (A) 145 (B) 3. Bromus arvensis 5 Yes FACU Prevalence Index = B/A = 4.83 4.	Herb Stratum (Plot size: 5)				FACU species 5 x 4 =	20	_		
2. Pseudoroegneria spicata 10 Yes UPL Column Totals: 30 (A) 145 (B) 3. Bromus arvensis 5 Yes FACU Prevalence Index = B/A = 4.83 4.	1. Bromus tectorum	10	Yes	UPL	UPL species 25 x 5 =	125	_		
3. Bromus arvensis 5 Yes FACU Prevalence Index = B/A =4.83 4	2. Pseudoroegneria spicata	10	Yes	UPL	Column Totals: 30 (A)	145	(B)		
4.	3. Bromus arvensis	5	Yes	FACU	Prevalence Index = B/A =	4.83	_		
5.	4								
6.	5.				Hydrophytic Vegetation Indicators	:			
7.	6.				Dominance Test is >50%				
8.	7.				Prevalence Index is ≤3.0 ¹				
Woody Vine Stratum (Plot size:) 25 = Total Cover data in Remarks or on a separate sheet) 1. Problematic Hydrophytic Vegetation ¹ (Explain) 1. 2.	8.				Morphological Adaptations ¹ (Prov	vide suppo	orting		
Woody Vine Stratum (Plot size:) Problematic Hydrophytic Vegetation ¹ (Explain) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2.		25	=Total Cover		data in Remarks or on a separate sheet)				
1.	Woody Vine Stratum (Plot size:)			Problematic Hydrophytic Vegeta	tion ¹ (Expla	ain)		
2	1.				¹ Indicators of hvdric soil and wetland	hvdroloav	must		
=Total Cover Hydrophytic Vegetation Vegetation Present? Yes No X Remarks:	2.				be present, unless disturbed or probl	ematic.			
% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0 Present? Yes No Remarks:			=Total Cover		Hydrophytic				
Remarks:	% Bare Ground in Herb Stratum 50 %	6 Cover of Biot	tic Crust 0		Present? Yes No	Х			
	Remarks:								

Brofile Doco	rintion: (Deceribe to t	ha danth	needed to doo	mont the	indiaa	tororo	onfirm the	abaanaa af	indicatoro	<u> </u>	
Profile Desc	Motrix	ne depth	Redeu to doct				ommin the	absence of	mulcators.)	
(inches)	Color (moist)	%	Color (moist)		s Tyne ¹	loc^2	Tov	turo		Romarke	
		100		70	1990	200				Condy Joom	
0-2	10YR 4/2	100					Sa	nay		Sandy loam	
	·										
			<u> </u>								
¹ Type: C=Co	ncentration, D=Depletio	n, RM=Re	educed Matrix, C	S=Covere	ed or Co	pated Sa	and Grains.	² Locati	ion: PL=Por	e Lining, M=I	Matrix.
Hydric Soil I	ndicators: (Applicable	to all LR	Rs, unless othe	erwise no	ted.)			Indicators	for Problem	natic Hydric	Soils ³ :
Histosol	(A1)		Sandy Rec	dox (S5)				1 cm N	/luck (A9) (L	RR C)	
Histic Ep	ipedon (A2)		Stripped M	latrix (S6)				2 cm N	/luck (A10) (l	LRR B)	
Black His	stic (A3)		Loamy Mu	cky Miner	al (F1)			Iron-M	anganese M	asses (F12)	(LRR D)
Hydroger	n Sulfide (A4)		Loamy Gle	eyed Matri	x (F2)			Reduc	ed Vertic (F1	18)	
Stratified	Layers (A5) (LRR C)		Depleted N	Aatrix (F3))			Red Pa	arent Materia	al (F21)	
1 cm Mu	ck (A9) (LRR D)		Redox Dar	k Surface	e (F6)		Very Shallow Dark Surface (F22)				
Depleted	Below Dark Surface (A	11)	Depleted D	Dark Surfa	ace (F7)			Other	(Explain in R	emarks)	
Thick Da	rk Surface (A12)		Redox Dep	pressions	(F8)						
Sandy M	ucky Mineral (S1)										
Sandy G	leyed Matrix (S4)	ndicators	of hydrophytic v	egetation	and we	tland hyd	drology mu	ist be presen	it, unless dis	turbed or pro	blematic.
Restrictive L	ayer (if observed):										
Туре:	bedrock		_								
Depth (in	ches): 2		_				Hydric S	oil Present?		Yes	No <u>x</u>
Remarks:											
soil very rock	y and difficult to dig										
HYDROLO	GY										
Wetland Hvd	Irology Indicators										
Primary Indic	ators (minimum of one i	s required	l: check all that a	(vlaae				Secondary	Indicators (r	minimum of t	wo required)
Surface \	Nater (A1)	<u>o roquiroc</u>	Salt Crust	(B11)				Water	Marks (B1)	(Riverine)	<u>no roquirou j</u>
High Water Table (A2) Biotic Crust (B12)							Sedim	ent Deposits	(B2) (Riveri	ne)	
Saturation (A3) Aquatic Invertebrates (B13)							Drift D	eposits (B3)	(Riverine)	,	
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1))		X Draina	ge Patterns	(B10)	
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres on Living F						iving Ro	oots (C3)	Dry-Se	ason Water	Table (C2)	
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)						C4)		Crayfis	sh Burrows (C8)	
Surface S	Soil Cracks (B6)		Recent Iro	n Reducti	on in Ti	led Soils	s (C6)	Satura	tion Visible o	on Aerial Ima	gery (C9)
Inundatio	on Visible on Aerial Imag	jery (B7)	Thin Muck	Surface ((C7)			Shallo	w Aquitard (I	D3)	
Water-St	ained Leaves (B9)		Other (Exp	lain in Re	marks)			FAC-N	leutral Test (D5)	
Field Observ	vations:										

Yes____ Yes____ Yes____
 No
 X
 Depth (inches):

 No
 X
 Depth (inches):

 No
 X
 Depth (inches):
 Wetland Hydrology Present? Yes No X Saturation Present? (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface Water Present? Water Table Present?

ATTACHMENT B

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): _	Desktop Delineated	Date of site visit: <u>5/27/</u> 2023
Rated by Jessica Taylor	Trained by Ecology?	Yes X No Date of training

HGM Class used for rating Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (*figures can be combined*). Source of base aerial photo/map <u>ESRI</u>

OVERALL WETLAND CATEGORY IV (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

_____Category I – Total score = 22-27

_____Category II – Total score = 19-21

____Category III – Total score = 16-18

X Category IV – Total score = 9-15

FUNCTION	Improving Water Quality		H	Hydrologic		Habitat				
	Circle the appropriate ratings									
Site Potential	Н	М	L	Н	М	L	Н	Μ	L	
Landscape Potential	Н	Μ	L	Н	M	L	Н	Μ	L	
Value	Н	M	L	Н	Μ	L	Н	Μ	L	TOTA
Score Based on Ratings		5			4			4		13

Score for each function based on three ratings (order of ratings is not *important*) 9 = H, H, H8 = H, H, M7 = H, H, L7 = H,M,M6 = H, M, L6 = M,M,M5 = H,L,L5 = M, M, L4 = M, L, L3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY Circle the appropriate category			
Vernal Pools	II III			
Alkali	Ι			
Wetland of High Conservation Value	I			
Bog and Calcareous Fens	Ι			
Old Growth or Mature Forest – slow growing	Ι			
Aspen Forest	Ι			
Old Growth or Mature Forest – fast growing	II			
Floodplain forest	II			
None of the above	X - Not Applicable			

Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	N/A
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	N/A
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	N/A
Map of the contributing basin	D 5.3	N/A
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		N/A
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	N/A
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	N/A

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	Н 1.1, Н 1.5	N/A
Hydroperiods	Н 1.2, Н 1.3	N/A
Ponded depressions	R 1.1	N/A
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	N/A
Map of the contributing basin	R 2.2, R 2.3, R 5.2	N/A
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	N/A
Width of wetland vs. width of stream (can be added to another figure)	R 4.1	N/A
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	N/A
polygons for accessible habitat and undisturbed habitat		,
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	N/A
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	N/A

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	N/A
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	N/A
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	N/A
1 km Polygon: Area that extends 1 km from entire wetland edge - including	Н 2.1, Н 2.2, Н 2.3	_
polygons for accessible habitat and undisturbed habitat		N/A
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	N/A
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	N/A

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	Н 1.1, Н 1.5	1
Hydroperiods	H 1.2, H 1.3	1
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		1
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		1
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	Attached
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	Attached

HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?

____The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size ____At least 30% of the open water area is deeper than 10 ft (3 m)

YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

- 2. Does the entire wetland unit **meet all** of the following criteria?
 - <u>X</u> The wetland is on a slope (*slope can be very gradual*),
 - <u>X</u> The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
 - <u>X</u> The water leaves the wetland **without being impounded**.

NO - go to 3

NO - go to 2

YES – The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

- 3. Does the entire wetland unit **meet all** of the following criteria?
 - ____ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
 - ____ The overbank flooding occurs at least once every 10 years.

NO - go to 4

YES – The wetland class is **Riverine**

NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 5

YES – The wetland class is Depressional

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland Rating System for Eastern WA: 2014 Update Rating Form – Effective January 1, 2015 Wetland name or number_____

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating	
Slope + Riverine	Riverine	
Slope + Depressional	Depressional	
Slope + Lake Fringe	Lake Fringe	
Depressional + Riverine (the riverine portion is within	Depressional	
the boundary of depression)	Depressional	
Depressional + Lake Fringe	Depressional	
Riverine + Lake Fringe	Riverine	

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

SLOPE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality		Points (only 1 score per box)
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of average slope of wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 10 horizontal distance)	0 ft of	
Slope is 1% or less point	:s = 3	
Slope is > 1% - 2% point	:s = 2	0
Slope is > 2% - 5% point	:s = 1	0
Slope is greater than 5% point	<u>:s = 0</u>	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or tureorganic (use NRCS definitions): Yes = 3	No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:		
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means	; you	
have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	е	
Dense, uncut, herbaceous plants > 90% of the wetland area point	:s = 6	3
Dense, uncut, herbaceous plants > ½ of area point	<mark>:s = 3</mark>	
Dense, woody, plants > ½ of area point	:s = 2	
Dense, uncut, herbaceous plants > ¼ of area point	:s = 1	
Does not meet any of the criteria above for plants point	:s = 0	
Total for S 1Add the points in the boxes a	bove	3
Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L Record the rat	ing on th	e first page

S 2.0. Does the landscape have the potential to support the water qu	ality function at the site?			
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in I	and uses that generate polluta	nts?		
	Yes = 1	No = 0	1 = Ag Chei	nic
S 2.2. Are there other sources of pollutants coming into the wetland that are	e not listed in question S 2.1?			l
Other sources	Yes = 1	No = 0	0	l
Total for S 2	Add the points in the boxe	es above	1	
				•

Rating of Landscape Potential If score is: X 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (<i>within 1 mi</i>)? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list. Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (<i>answer</i> YES if there is a TMDL for the drainage or basin in which wetland is found)? Yes = 2 No = 0	0
Total for S 3Add the points in the boxes above	1

<u>Rating of Value</u> If score is: <u>2-4 = H X 1 = M</u> 0 = L

Record the rating on the first page

The Columbia River is on the 303d List in this basin.

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and erosion	Points (only 1 score per box)
S 4.0. Does the site have the potential to reduce flooding and erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect during surface flows.	
Dense, uncut, rigid plants cover > 90% of the area of the wetlandpoints = 1All other conditionsSite was bare in winter, some weedy veg including cattail in summerpoints = 0	0

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff? Wheat crop on slope is bare after seeding until wheat emerges. Yes = 1 No = 0	1

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has surface flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	0
S 6.2. Has the site been identified as important for flood storage and flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6Add the points in the boxes above	0
Rating of ValueIf score is: $2-4 = H$ $1 = M$ $X_0 = L$ Record the rating on t	he first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes.	(only 1
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	score per box)
H 1.0. Does the wetland have the potential to provide habitat for many species?	,
H 1.1. Structure of the plant community: Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= ¼ ac or >= 10% of the wetland if wetland is < 2.5 ac. Aquatic bed	
Emergent plants 0-12 in (0-30 cm) high are the highest layer and have > 30% cover Emergent plants >12-40 in (>30-100 cm) high are the highest layer with >30% cover Emergent plants > 40 in (> 100 cm) high are the highest layer with >20% cover	-
	0
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	0
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac OR 10% of its area during the March to early June OR in August to the end of September? Answer YES for Lake Fringe wetlands. Yes = 3 points & go to H 1.4 NO = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? Answer yes only if H 1.3.1 is No. Waterway is ephemeral per SDAM Yes = 3	0
H 1.4. <u>Richness of plant species</u> Count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk) # of species <u>1</u> Scoring: > 9 species: points = 2 4-9 species: points = 1 < 4 species: points = 0	0
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.	Figure <u>1</u>
None = 0 points Low = 1 point All three diagrams in this row are High = 3 points Image: Control of the second sec	0
Riparian braided channels with 2 classes	

Wetland name or number_____

H 1.6. Special habitat features	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface	
ponding or in stream.	
X Cattails or bulrushes are present within the wetland.	
Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge.	
Emergent or shrub vegetation in areas that are permanently inundated/ponded.	1
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree	
slope) OR signs of recent beaver activity	
Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs,	
herbaceous, moss/ground cover)	
Total for H 1 Add the points in the boxes above	1

Rating of Site Potential If score is: 15-18 = H 7-14 = M <u>X</u> 0-6 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:	
Calculate: 0 % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0%	
> ¹ / ₃ (33.3%) of 1 km Polygon points = 3	
20-33% of 1km Polygon points = 2	0
10-19% of 1km Polygon All land directly adjacent to wetland is in winter wheat . points = 1	-
<10% of 1km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around wetland.	
Calculate: 0 % undisturbed habitat + [(% moderate and low intensity land uses)/2] =0_%	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	0
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon:	
> 50% of Polygon is high intensity land use points = (- 2)	-2
Does not meet criterion above points = 0	
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by	
irrigation practices, dams, or water control structures. Generally, this means outside boundaries of	3
reclamation areas, irrigation districts, or reservoirs Yes = 3 No = 0	
Total for H 2 Add the points in the boxes above	1

Rating of Landscape Potential If score is: 4-9 = H X 1-3 = M

X 1-3 = M
X 1 = L
Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score	
that applies to the wetland being rated	
Site meets ANY of the following criteria: points = 2	
 It has 3 or more priority habitats within 100 m (see Appendix B) 	
— It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists)	
 It is mapped as a location for an individual WDFW species 	
— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	0
— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1	
Site does not meet any of the criteria above points = 0	

<u>Rating of Value</u> If score is: <u>2 = H</u> <u>1 = M</u> <u>X</u> <u>0 = L</u> Record the rating on the first page

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Vernal pools	
Is the wetland less than 4000 ft² , and does it meet at least two of the following criteria?	
— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater	
input.	
— Wetland plants are typically present only in the spring; the summer vegetation is typically upland	
annuals. If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.	
— The soil in the wetland is shallow [< 1 ft (30 cm)deep] and is underlain by an impermeable layer such as basalt or clay.	
— Surface water is present for less than 120 days during the wet season.	
Yes – Go to SC 1.1 No = Not a vernal pool	
SC 1.1. Is the vernal pool relatively undisturbed in February and March?	
Yes – Go to SC 1.2 No = Not a vernal pool with special characteristics	
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?Yes = Category IINo = Category III	Cat. II Cat. III
SC 2.0. Alkali wetlands	
Does the wetland meet one of the following criteria?	
— The wetland has a conductivity > 3.0 mS/cm.	
— The wetland has a conductivity between 2.0 and 3.0 ms, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems).	
— If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.	
OR does the wetland unit meet two of the following three sub-criteria?	
 — Salt encrustations around more than 75% of the edge of the wetland 	
— More than ¾ of the plant cover consists of species listed on Table 4	
— A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands	
may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.	Cat. I
Yes = Category I No= Not an alkali wetland	
SC 3.0. Wetlands of High Conservation Value (WHCV)	
SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value? Yes – Go to SC 3.2 No – Go to SC 3.3	
SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I No = Not a WHCV	Cat. I
SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 3.4 No = Not a WHCV	
SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed	
on their website? Yes = Category I No =Not a WHCV	

SC 4 0 Bogs and Calcareous Fens	
Dees the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bors or	
bles the wettand (of any part of the wettand unit) meet both the chteria for sons and vegetation in bogs of	
calcareous tens? Use the key below to identify if the wetland is a bog of calcareous jen. If you answer yes	
you will still need to rate the wetland based on its functions.	
SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or	
mucks, that compose 16 in or more of the first 32 in of the soil profile? See Appendix C for a field key to	
<i>identify organic soils.</i> Yes – Go to SC 4.3 No – Go to SC 4.2	
SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over	
bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to SC 4.3 No = Is not a bog for rating	
SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of	
the total plant cover consists of species in Table 5? Yes = Category I bog No – Go to SC 4.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion	
by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0	
and the plant species in Table 5 are present, the wetland is a bog.	
SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western	
hemlock, lodgepole pine, quaking aspen. Engelmann spruce, or western white pine, AND any of the species	
(or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?	Cat. I
$Y_{\text{PS}} = \text{Category I hog} \text{ No - Go to SC 4.5}$	
SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and	
mucks? Ves - Is a Calcareous Een for nurnose of rating No - Go to SC 4.6	
SC / 6 Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of neats and mucks	
AND one of the two following conditions is met:	
AND one of the two following conditions is met.	Cat
— Man deposits [calcium carbonate ($CaCO_3$) precipitate] occur on the son surface of plant stems	Cat. I
- The pH of free water is 2 6.8 AND electrical conductivity is 2 200 uS/cm at multiple locations within the	
wetlandYes = is a Category I calcareous fenNo = is not a calcareous fen	

SC 5.0. Forested Wetlands	
Does the wetland have an area of forest rooted within its boundary that meets at least one of	
the following three criteria? (Continue only if you have identified that a forested class is present	
in question H 1.1)	
 The wetland is within the 100 year floodplain of a river or stream 	
— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species	
— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or	
"old-growth" according to the definitions for these priority habitats developed by WDFW	
(see definitions in question H3.1)	
Yes – Go to SC 5.1 No = Not a forested wetland with special characteristics	
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow	Cat. I
growing native trees (<i>see Table 7</i>)? Yes = Category I No – Go to SC 5.2	
SC 5.2. Does the wetland have areas where aspen (Populus tremuloides) represents at least 20% of the total cover	Cat. I
of woody species? Yes = Category I No – Go to SC 5.3	
SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by	Cat. II
cover) are fast growing species (<i>see Table 7</i>)? Yes = Category II No – Go to SC 5.4	
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?	Cat. II
Yes = Category II No = Not a forested wetland with special characteristics	
Category of wetland based on Special Characteristics	
Choose the highest rating if wetland falls into several categories	NI/A
	IN/A

Appendix B: WDFW Priority Habitats in Eastern Washington

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: *NOTE: This question is independent of the land use between the wetland and the priority habitat.*

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Old-growth/Mature forests: <u>Old-growth east of Cascade crest</u> Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. <u>Mature forests</u> Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 see web link above*).
- **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or
 other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm)in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- **Shrub-steppe:** A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).
- Eastside Steppe: Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).
- Juniper Savannah: All juniper woodlands.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland Rating System for Eastern WA: 2014 Update Effective January 1, 2015 Appendix B This page left blank intentionally



Water Quality Atlas Map





Washington State Water Quality Assessment 303(d)/305(b) List

Approved WQ Assessment Contact Us WQ Atlas



No Results Returned

